BANGALORE WATER SUPPLY AND SEWERAGE BOARD

5th Floor, Cauvery Bhavan "D" Block,
K.G. Road, Bangalore 560009

Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 years. (2nd call)

(Through Karnataka Public Procurement Portal only)

https://wwwkppp.gov.in

Office of the Chief Engineer (Waste Water Management-East)
BANGALORE WATER SUPPLY & SEWERAGE BOARD
5th Floor, Cauvery Bhavan D-Block,
K.G. Road, Bangalore 560009
Telephone – 080-22945106

TENDER REFERENCE :	:	BWSSB/CE(WWM-E)/DCE(WWM-E&W)/TA-1/ 478/2023-24 Dt: 29-11-2023
NAME OF THE WORK	:	Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 year(2nd call)
LAST DATE AND TIME FOR RECEIPT OF TENDERS	:	08-12-2023 17:30hrs
TIME AND DATE OF OPENING OF TECHNICAL TENDERS	:	11-12-2023 16:00hrs
PLACE OF OPENING OF TECHINCAL TENDERS	:	Office of The Chief Engineer (Waste Water Management-East) Bangalore Water Supply & Sewerage Board 5th Floor, Cauvery Bhavan D-Block, K.G. Road, Bangalore 560009
TIME AND DATE OF OPENING OF PRICE TENDERS	:	Will be intimated to the qualified tenderers
PLACE OF OPENING OF PRICE TENDER	:	Will be intimated to the qualified tenderers
ADDRESS FOR COMMUNICATION	:	Office of The Chief Engineer (Waste Water Management-East) Bangalore Water Supply & Sewerage Board 5th Floor, Cauvery Bhavan D-Block, K.G. Road, Bangalore 560009

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BANGALORE WATER SUPPLY AND SEWERAGE BOARD
Office of The Chief Engineer (Waste Water Management)
5th Floor, Cauvery Bhavan, K.G. Road, Bangalore-560009

INVITATION FOR TENDER

(ONLY THROUGH KARNATAKA PUBLIC PROCUREMENT PORTAL)

IFT No.: BWSSB/CE(WWM-E)/DCE(WWM-E&W)/TA-1/ 478 /2023-24

Dt: 29-11-2023

SECTION 1

INVITATION FOR TENDER

1. The **Chief Engineer(Waste Water Management)** invites tenders from eligible tenderers for the **Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 years** (**2nd call)**detailed in the table below. Tenderers are requested to submit their tender, EMD and details of their capability to undertake the tender (as detailed in ITT Clause-3 & 6) in the Karnataka Karnataka Public Procurement Portal. Price tender will be opened only if the Tenderer is found to be qualified to execute the tendered works. Tenderers are advised to note the minimum qualification criteria specified in clause 3 of the Instructions to Tenderers to qualify for award of the contract.

2. Tender documents may be downloaded through Karnataka Public Procurement Portal www.kppp.gov.in website only from **01-12-2023 to 08-12-2023**Interested Tenderers may obtain further information by accessing the same website.

3. Tenders must be accompanied by Earnest Money Deposit specified for the work in the Table below. EMD will have to be in any one of the forms as specified in the Tender document and shall have to be valid for **45**days beyond the validity of the tender.

4. The last date and time for receipt of tenders in the Electronic Tender Box in website (www.kppp.gov.in) is **08-12-2023 up to 17:30 hrs**. The technical bids will be opened **on 11-12-2023 at 16:00hrs**. If the bid-opening day remains as public holiday, bids will be opened on the next working day at the original stipulated time.

5. Other details can be seen in the tender documents.

Sl. No	Name of the work	Tender processing	Amount put to	Bid securit	Period of completi	Eligibility criteria during last 5 years (2018-19, 2019-20, 2020-21, 2021-

		fee	tender Rs. (approx)	y Rs. (EMD)	on	22,2022-23)	
						Financial Turnover (in all classes of Civil Engg. Construction works) for any of the two years during the last five years Rs.	Performance and work Qualification
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 years (2nd call)**	As per Karnataka Public Procurement portal.	**-Rs. 477.58 Lakhs (Excluding GST @18 %)**	**Rs. 8.45 Lakh**	**36 months**	**Rs. 375.70 Lakh.**	i)As a Prime Contractor, the tenderer should have satisfactorily completed at least one similar work such as Operation and Maintenance of Tertiary Treatment Plant (TTP) based on Membrane Bio Reactor(MBR)Technology of value not less than **Rs.281.775 lakhs** in the last five financial years 2018-19 to 2022-23. ii)The tenderer should have executed in any one

							financial year Operational & maintenance of 3 MLD capacity Tertiary Treatment Plant (TTP) based on Membrane Bio Reactor(MBR)Technology iii) Each tender should further demonstrate: Assessed available tender capacity = (A*N*1.5 - B) **>=Rs.563.55 Lakh (Amount put to tender including GST@18%)** iv) The tenderer should demonstrate Liquid assets and /or availability of credt facilities of not less than **Rs. 46.96 lakh** (Credit lines/letter of credit/certificates from Nationalized / Schedule banks in India for meeting the fund requirement etc.,)

NOTE:

1. a. The amount put to tender Rs.477.58 Lakhs is Excluding GST at 18% and the bidder should quote for the amount.

b.The GST amount is of Rs.85.96 Lakhs

2. The financial bid evaluation will be based on 1(a) of above Note

6. EMD shall be paid through OTC, NEFT, DEBIT CARD &CREDIT CARD through Karnataka Public Procurement Portal Only. The value of the Bid Security / EMD is as mentioned in the table above in column no 5.
7. Tenderers can access tender documents from www.kppp.gov.in website only and upload the required details; those are mentioned in different sections in the bid document in to electronic tender on the website. Scanned documents those are required to be furnished as per Section 2, 3 & 4 of the bid document shall be submitted through Karnataka Public Procurement Portal.
8. The Tender processing fee once paid will not be refunded.
9. The successful Tenderer would be required to furnish the performance Bank Guarantee from a Nationalized / Scheduled Indian Bank, with jurisdiction at Bangalore as specified, towards guarantee for completion of work within the stipulated period as mentioned in tender document.
10. Applications / requisitions from joint venture Firms are not acceptable.
11. Bangalore Water Supply and Sewerage Board (BWSSB) reserves the right to cancel or annul the entire or part of this process of invitation at any time without assigning any reasons.
12. For any additional information regarding the above tender, the firms who are interested to quote, may contact office of the undersigned at the office address given below on all working days during office hours (10:30hours to 17:00 hours).

Bangalore Water Supply & Sewerage Board
Office of Chief Engineer (Waste Water Management)
5th Floor, Cauvery Bhavan,
K.G.Road, Bangalore.
Telefax:080-22945106

13. Tenderers shall submit offers that comply with the requirements of the bid document.

Corrigendum / Modification / Corrections, if any will be published in the website only.

Sd/-

Chief Engineer
(Waste Water Management-East)(i/c)

SECTION 2:

INSTRUCTIONS TO TENDERERS (ITT)

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A. General

1. Scope of Tender

1.1 The **Chief Engineer (WWM-E),** (Referred to as Employer in these documents) invites tenders following Two Stage Karnataka Public Procurement Portal procedure, from eligible Tenderers **Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 years 2nd call**(as defined in these documents and referred to as "the work") detailed in the Table given in the Invitation for Tenders (IFT).

2. Eligible Tenderers

2.1 Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Karnataka

2.2 Tenders from Joint ventures are not acceptable.

3. Qualification of the Tenderer:

3.1 All Tenderers shall provide the requested information accurately and in sufficient detail in Section 3: Qualification information.

3.2 To qualify for award of this contract, each Tenderer in its name should have in the last five years i.e. 2018-19 to 2022-23)

a) `Achieved in at least two financial years a minimum financial turnover (in all classes of civil engineering construction works only)of **Rs.375.70 Lakh.**

i) The firm as prime contractor, in any one year should have satisfactorily completed at least one similar contract such as Operation and Maintenance of STP of value not less than **Rs.281.775 lakh** in the last five financial years 2018-19 to 2022-23

ii) The tenderer should have executed in any one financial year Operational & maintenance of 3 MLD capacity Tertiary Treatment Plant (TTP) based on Membrane Bio Reactor(MBR)Technology

b) DELETED

c) DELETED

3.3 Each Tenderer should further demonstrate:

a. DELETED

b. Liquid assets and /or availability of credit facilities of not less than **Rs. 46.96 lakh** (Credit lines/letter of credit/certificates from Nationalised / Schedule banks in India for meeting the fund requirement etc.,

3.4 To qualify for a package of contracts made up of this and other contracts for which tenders are invited in this IFT, the tenderer must demonstrate

having experience and resources to meet the aggregate of the qualifying criteria for the individual contracts.

3.5 Sub-contractors experience and resources shall not be taken into account in determining the Tenderers compliance with the qualifying criteria except to the extent stated in 3.2 above.

3.6 Tenderers who meet the above specified minimum qualifying criteria, will only be qualified, if their available tender capacity is more than the total tender value. The available tender capacity will be calculated as under:

Assessed available tender capacity = (A*N*1.5 - B)>= Rs.563.55 Lakh
(Amount put to tender including GST@18%)

where

A = Maximum value of civil engineering works executed in any one year during the last five years (updated to 2022-23 price level at 10% per year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which tenders are invited.

B = Value, at 2022-23 price level, of existing commitments and on-going works to be completed during the next **36** months**.**

Note: The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Employer in charge, not below the rank of an Executive Engineer or equivalent.

3.7 Even though the Tenderers meet the above criteria, they are subject to be disqualified if they have:

- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- participated in the previous Tender for the same work and had quoted unreasonably high tender prices and could not furnish rational justification.

4. One Tender per Tenderer:

4.1 Each tenderer shall submit only one tender for one package. A tenderer who submits or participates in more than one tender (other than as a sub-contractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Tenderer’s participation to be disqualified.

5. Cost of Tendering:

5.1 The tenderer shall bear all costs associated with the preparation and submission of his tender, and the Employer will in no case be responsible and liable for those costs.

6. Site visit:

6.1 The Tenderer at his own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Tenderers own expense.

B. Tender documents

7. Content of Tender documents

7.1 The set of tender documents shall have all the Sections given in Page 2:

7.2 Both the sets should be completed and uploaded with the tender.

8. Clarification of Tender Documents

8.1 A prospective tenderer requiring any clarification of the tender documents may notify the Employer by posting in the web site (eprocurement→My tenders→action→queries). No identity of the participating tenderer shall be mentioned in the query. All queries & replies can be viewed by all participating tenderers.

8.2 Pre-tender meeting: ***Deleted***

9. Amendment of Tender documents

9.1 Before the deadline for submission of tenders, the Employer may modify the tender documents by issuing addenda.

9.2 Any addendum thus issued shall be part of the tender documents and shall be posted in the Karnataka Public Procurement website for viewing by all the purchasers of the tender documents.

9.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer shall extend as necessary the deadline for submission of tenders, in accordance with Sub-Clause 16.2 below.

C. Preparation of Tenders

10. Documents comprising the Tender

10.1.1 The tender submitted in Karnataka Public Procurement Portal by the Tenderer shall contain the documents as follows:

a) Scanned copy of Earnest Money Deposit.
b) The form of Tender (in the format indicated in Section 4)

c) Scanned copies of the certificates supporting the Qualification as in Section 3. Any other materials required to be completed and submitted by Tenderers in accordance with these instructions. The documents listed under Sections 3, 4, 6 and 9 shall be filled in without exception. PHOTOCOPIES OF THE DOCUMENTS SHOULD BE NOTARISED.

10.1.2 Rates for the Bill of Quantities (Section 9) shall be quoted at the provision made in the Karnataka Public Procurement website Portal.

10.2 Tenderers submitting tenders together with other contracts stated in the IFT to form a package will so indicate in the tender together with any discounts offered for the award of more than one contract.

11. Tender prices

11.1 The contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Tenderer.

11.2 The Tenderer shall fill in the unit rates in figures for all items of the Works described in the Bill of Quantities. The system will automatically calculate the amount of that item as well as the total Tender value. ***Items for which no rate is entered by the Tenderer will not be paid for by the Employer when executed and shall be deemed covered by the other rates in the Bill of Quantities***

11.3 All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause, shall be included in the rates, prices and total Tender Price submitted by the Tenderer.

11.4 DELETED

12. Tender validity

12.1 Tenders shall remain valid for a period not less than **ninety days** after the deadline date for tender submission specified in Clause 16. A tender valid for a shorter period shall be rejected by the Employer as non-responsive.

12.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the Tenderers may extend the period of validity for a specified additional period. The request and the Tenderers responses shall be made in writing or e-mail. A Tenderer may refuse the request without forfeiting his earnest money deposit. A Tenderer agreeing to the request will not be required or permitted to modify his tender, but will be required to extend the validity of his earnest money deposit for a period of the extension, and in compliance with Clause13 in all respects.

13. Earnest money deposit

13.1 Earnest Money Deposit shall be paid through Karnataka Public Procurement Portal only using any of the following four modes.

i. Credit Card (Online Payment)
ii. Direct Debit Using Internet Banking (Online Payment)
iii. Remittance at the Bank Counter - Challan (Offline Payment)

iv. NEFT (Offline payment).

13.2 Instruments having fixed validity issued as earnest money deposit for the tender shall be valid for 45 days beyond the validity of the tender.

13.3 Any tender not accompanied by an acceptable earnest money deposit and not secured as indicated in Sub-Clauses 13.1 and 13.2 above shall be rejected by the Employer as non-responsive.

13.4 The earnest money deposit of unsuccessful Tenderers will be returned within 30 days of the end of the tender validity period specified in Sub-Clause 12.1.

13.5 The earnest money deposit of the successful Tenderer will be discharged when the Tenderer has signed the Agreement and furnished the required Performance Security.

13.6 The Earnest money deposit may be forfeited:

a) if the Tenderer withdraws the Tender after tender opening during the period of tender validity;
b) if the Tenderer does not accept the correction of the Tender Price, pursuant to Clause 24; or
c) in the case of a successful Tenderer, if the Tenderer fails within the specified time limit to
   (i) Sign the Agreement; or
   (ii) Furnish the required Security deposit

14. Format and signing of Tender

14.1 The completed tender comprising of documents indicated in ITT 10, should be uploaded in the Karnataka Public Procurement website along with scanned copies of requisite certificates those are mentioned in different sections in the bid document and scanned copy of tender Security / EMD.

14.2 All the documents should be uploaded in Karnataka Public Procurement website. Tenderer should take a print out of the Form of Tender in the Section 4 of the tender document on company letter head and should sign, stamp and upload the same to the tender. Authenticity of the singing authority shall be furnished. With this, it is taken that tenderer has signed & submitted the tender.

14.3 The Tender shall contain no alterations or additions, except those to comply with instructions issued by the Employer.

D. Submission of Tenders

15. Up-loading & submission of tenders

15.1 The tenders should be uploaded only through Karnataka Public Procurement Website. Tender should contain

A. Technical Tender consisting of following:

a. All the documents with required details in prescribed format; those are mentioned in different sections in the Tender. Form of Tender, etc., shall be downloaded, filled with required details, signed, scanned & uploaded to the Karnataka Public Procurement Portal (www.kppp.gov.in)

b. The above documents along with notarized copies of documentary evidences as indicated in Section—2 of ITT, Section-3 Qualification information & Section-4 Forms of Tender shall be scanned and uploaded to

the website compulsorily, failing which tender will be rejected in view of incomplete tender document and

B. Financial Tender consisting of Bill of Quantities

15.1 All rates for the items in the Schedule shall be posted in the work template provided in the tender document. Rates shall be entered in figures only.

15.2 DELETED

15.3 BID reference Number will be automatically generated by the server.

15.4 DELETED

16. Deadline for submission of the Tenders

16.1 DELETED.

16.2 The Employer may extend the deadline for submission of tenders by issuing an amendment in accordance with Clause 9, in which case all rights and obligations of the Employer and the Tenderers previously subject to the original deadline will then be subject to the new deadline.

17. Late Tenders

17.1 The software of Karnataka Public Procurement website system will not allow the Tenderer to upload the documents after expiration of the stipulated date & time of Bid submission. The Tenderer shall refer the server time, which will be displayed in the Karnataka Public Procurement Portal. BWSSB will not be responsible for non-receipt of bids on the stipulated date & time prescribed in clause 16, due to Internet Problems, improper uploading or any other related problems. In case of connectivity problems, Tenderer may contact Helpdesk of the Karnataka Public Procurement Portal service provider and may also draw the attention of tender inviting authority.

18. Modification and Withdrawal of Tenders

18.1 Tenderers may “modify” and “withdraw” their tenders multiple numbers of times, until the deadline for submission of tenders by operating the relevant provision made in Karnataka Public Procurement Portal. If the Tenderer withdraws the tender before the deadline for submission of tenders and later if he is interested to submit the tender once again, may do so within the stipulated date & time as mentioned in Clause 16. In this case within the stipulated date & time, the tenderer can once again submit the requisition to the officer inviting tenders for access to the withdrawn tender document for resubmission. For this tenderer need not make any additional payment towards the cost of tender document. Communication of modification / withdrawal by other means will not be accepted.

18.2 DELETED

18.3 No Tender may be modified after the deadline for submission of Tenders.

18.4 Withdrawal or modification of a Tender between the deadline for submission of Tenders and the expiration of the original period of Tender validity specified in Clause 12.1 above or as extended pursuant to Clause 12.2 may result in the forfeiture of the earnest money deposit pursuant to Clause 13.

18.5 DELETED

E. Tender opening and evaluation

19. Opening of Technical Bid of Tenders and evaluation to determine qualified Tenderers:

19.1 The Employer will open the Technical details of all the Tenders received (except those withdrawn), including modifications made pursuant to Clause 18, in the presence of the Tenderers or their representatives who choose to attend at the Employer's office mentioned in the earlier para at 15:00 hours on the date and the place specified. In the event of the specified date of Tender opening being declared a holiday for the Employer, the Tenders will be opened at the appointed time and location on the next working day.

19.2 WITHDRAWAL proposal submitted pursuant to clause 18 shall be read out first and their bids shall not be opened.

19.3 The Tenderers names, the presence or absence of earnest money deposit (amount, format and validity), the submission of qualification information and such other information as the Employer may consider appropriate will be announced by the Employer at the opening.

19.4 The Employer shall prepare minutes of the Tender opening, including the information disclosed to those present in accordance with Sub-Clause 19.3.

19.5 The Price Tenders of all the Tenderers including modifications for financial tenders cannot be opened as this is programmed to open later after evaluation of the Technical details of the participating Tenderers.

19.6 The Employer will evaluate and determine whether each tender (a) meets the eligibility criteria defined in ITT Clause 2; (b) is accompanied by the required earnest money deposit as per stipulations in ITT Clause and (c) meets the minimum qualification criteria stipulated in ITT Clause 3. The Employer will draw out a list of qualified Tenderers.

20. Opening of Financial Bid of qualified Tenderers and evaluation:

20.1 The Employer will inform all the Qualified Tenderers the time, date and venue fixed for the opening of the price Tenders. The Employer will open the price tender of Qualified Tenderers at the appointed time and date in the presence of the Tenders or their representatives who choose to attend. In the event of the specified date of Price tender opening being declared a holiday for the Employer,

the price tenders will be opened at the appointed time and location on the next working day.

20.2 DELETED

20.3 The Tenderers' names, the Tender prices, the total amount of each Tender, any discounts, and withdrawals, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No Tender shall be rejected at Tender opening.

20.4 The Employer shall prepare minutes of the Price Tender opening, including the information disclosed to those present in accordance with Sub-Clause 20.3.

21. Process to be confidential

21.1 Information relating to the examination, clarification, evaluation, and comparison of Tenders and recommendations for the award of a contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced. Any effort by a Tenderer to influence the Employer's processing of Tenders or award decisions may result in the rejection of his Tender.

22. Clarification of Tenders

22.1 To assist in the examination, evaluation, and comparison of Tenders, the Employer may, at his discretion, ask any Tenderer for clarification of his Tender, including breakdowns of unit rates. The request for clarification and the response shall be in writing but no change in the price or substance of the Tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Tenders in accordance with Clause 24.

22.2 Subject to sub-clause 22.1, no Tenderer shall contact the Employer on any matter relating to its Tender from the time of the Tender opening to the time the contract is awarded. If the Tenderer wishes to bring additional information to the notice of the Employer, it should do so in writing.

22.3 Any effort by the Tenderer to influence the Employer in the Employer’s Tender evaluation, Tender comparison or contract award decisions may result in the rejection of the Tenderers’ Tender.

23. Examination of Tenders and determination of responsiveness

23.1 Prior to the detailed evaluation of Tenders, the Employer will determine whether each Tender; (a) has been properly signed; and; (b) is substantially responsive to the requirements of the Tender documents like (a)Form of Tender, (b)Declaration statement Scanned/ uploaded [including documents those are required to be furnished as per Section 2, 3 & 4 of the tender,]; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the tendering documents.

23.2 A substantially responsive Tender is one which conforms to all the terms, conditions, and specifications of the Tender documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Tender documents, the Employer's rights or the Tenderer's obligations under the

Contract; or (c) whose rectification would affect unfairly the competitive position of other Tenderers presenting substantially responsive Tenders.

23.3 If a Tender is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non conforming deviation or reservation.

24. Correction of errors

24.1 Once the Tenderer key in the rates in figures, in the Bill of quantities provided, the system will automatically calculate the amount of that item as well as the total Bid value.

24.2 Deleted

25. Evaluation and comparison of Tenders

25.1 The Employer will evaluate and compare only the Tenders determined to be substantially responsive in accordance with Clause 23.

25.2 In evaluating the Tenders, the Employer will determine for each Tender the evaluated Tender Price by adjusting the Tender Price as follows:

(a) Making any correction for errors pursuant to Clause 24; and

(b) DELETED

25.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Tender documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Tender evaluation.

25.4 DELETED

25.5 If the tender of the successful tenderer is seriously unbalanced in relation to the Employer's estimate of the cost of the work to be performed under the contract, the Employer may require the Tenderer to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 29 be increased at the expense of the successful Tenderer to a level sufficient to protect the Employer against financial loss in the event of default of the successful under the contract.

F. Award of Contract

26. Award criteria

26.1 Subject to Clause 27, the Employer will award the Contract to the Tenderer whose Tender has been determined to be substantially responsive to the Tender documents and who has offered the lowest evaluated Tender Price, provided that such Tenderer has been determined to be (a) eligible in accordance with the

provisions of Clause 2, and (b) qualified in accordance with the provisions of Clause 3.

27. Employer's right to accept any Tender and to reject any or all Tenders

27.1 Notwithstanding Clause 26, the Employer reserves the right to accept or reject any Tender, and to cancel the Tender process and reject all Tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the Employer's action.

28. Notification of award and signing of Agreement

28.1 The Tenderer whose Tender has been accepted will be notified of the award by the Employer prior to expiration of the Tender validity period by writing, e-mail or by registered letter. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

28.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of Security deposit in accordance with the provisions of Clause 29.

28.3 The Agreement will incorporate all agreements between the Employer and the successful Tenderer. It will be kept ready for signature of the successful Tenderer in the office of Employer within 30 days following the notification of award along with the Letter of Acceptance. Within 20 days of receipt, the successful Tenderer will sign the Agreement and deliver it to the Employer.

28.4 Upon the furnishing by the successful Tenderer of the Performance Security, the Employer will promptly notify the other Tenderers that their Tenders have been unsuccessful.

29. Security deposit

29.1 Within 20 days of receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer a Security deposit in any of the forms given below for an amount equivalent to 5% of the Contract price plus additional security for unbalanced tenders in accordance with Clause 25.5 of ITT and Clause 44 of the Conditions of Contract. :

- A bank guarantee in the form given in Section 10;

29.2 If the security deposit is provided by the successful Tenderer in the form of a Bank Guarantee, it shall be issued either by a Nationalized/Scheduled bank and valid in accordance with Clause 43 of Condition of Contract.

29.3 DELETED

29.4 Failure of the successful Tenderer to comply with the requirements of Sub-Clause 29.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest money deposit.

30. DELETED

31. Corrupt or Fraudulent practices

31.1 The GOK requires that the Tenderers/Suppliers/Contractors, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, GOK :

a) will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

b) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a GOK contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a GOK contract.

31.2 Furthermore, Tenderers shall be aware of the provision stated in sub-clause 50.2 of the Conditions of Contract.

Sd/-

Chief Engineer (Waste Water Management-E)

SECTION 3:

QUALIFICATION INFORMATION

The following form is to be downloaded, particulars are to be filled, scanned & uploaded by the Tenderer.

The information to be filled in by the Tenderer hereunder will be used for purposes of computing Tender capacity as provided for in Clause 3 of the Instructions to Tenderers. This information will not be incorporated in the Contract.

1.1 Constitution or legal status of Tenderer [Attach copy]
Place of Registration _____
(Attach Copy)
Principal place of business: _____

1.2 Total value of civil engineering construction works executed and payments received in the last five years (in Rs. Lakh) [attach certificate of Chartered accountant]

2018 – 19	_____
2019 – 20	_____
2020 – 21	_____
2021 – 22	_____
2022 - 23	_____

1.3 Work performed as Prime Contractor (in the same name) on works of similar nature over during the five years specified in 1.2 above.

Project Name	Name of Employer	Description of Work	Contract Number	Value of contract Rs. Lakh	Date of issue of work order	Specified period of completion	Actual date of completion	Remarks explaining reasons for delay in completion of work
1	2	3	4	5	6	7	8	9

1.4 Quantities of work executed as prime contractor (in the same name) during the last five years specified in 1.2 above: [to support the qualification criteria in ITT clause 3]

Year	Name of Work	Name of Employer	Quantity of work performed (cum)		Remarks (Indicate contract reference)

1.5 Information on works for which Tenders have been submitted and works which are yet to be completed as on the date of this Tender.

(A) Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. Lakh)	Stipulated period of completion	Value of works remaining to be completed (Rs. Lakh)	Anticipated date of completion
1	2	3	4	5	6	7	8

(B) Works for which Tenders already submitted:

Description of Work	Place & State	Name and Address of Employer	Estimated value of works (Rs. Lakh)	Stipulated Date period of completion	when decision is expected	Remarks if any
1	2	3	4	5	6	7

1.6 Items of equipment essential for carrying out the works.

Item of Equipment	Requirement			Owned and available		Remarks
	No.	Capacity	Owned	Number/ Capacity	Age/ Condition	

1.7 Reports on the financial standing of the tenderer, such as profit and loss statements and auditor's reports for the last five years;

1.8 Qualification and experience of the key technical and management personnel in permanent employment with the tenderer and those that are proposed to be deployed on this contract, if awarded.

1.9. Name, address, and telephone, telex, and fax numbers of the Tenderers' bankers who may provide references if contacted by the Employer.

1.10 Evidence of access to financial resources to meet the qualification requirement specified in ITT Clause3.3 (b): Cash in hand, Letter of Credit etc. List them below and attach certificate from the Banker in the suggested format as under:

BANKER'S CERTIFICATE

This is to certify that M/s. ..... is a reputed company with a good financial standing. If the contract for this work, namely ..... (name of the work) is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. ..... to meet the working capital requirements for executing the above contract

Sd/-
Name of the Bank, Senior Bank Manger
Address:.....

1.11 Proposals for subcontracting components of works amounting to more than 20% of the contract price .

Item of Work	Value of Sub-Contract	Identified Sub-Contractor (Name and address)	Experience of similar work

1.12 Information on litigations in which the Tenderer is involved:

Other Party (ies)	Employer	Details of dispute	Amount involved	Remarks showing present status

1.13 The proposed methodology and program of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones.

Sd/-
Chief Engineer
(Waste Water Management-E)

SECTION 4:

[Tenderer shall down load this page, print on the letter head, fill the gaps with signature, scan the sheet & upload to the website. Failing which the tender will be treated as non-responsive]

FORMS OF TENDER, LETTER OF ACEPTANCE, NOTICE TO PROCEED WITH THE WORK AND AGREEMENT FORM

Form of Tender

Description of the Work: **Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 years(2nd call)**

To

The Chief Engineer (Waste Water Management-E)
Bangalore Water Supply & Sewerage Board
5th Floor, Cauvery Bhavan D-Block,
K.G. Road, Bangalore 560009

GENTLEMEN,

We offer to execute the Works described above in accordance with the Conditions of Contract accompanying this Tender for the Contract Price uploaded for this tender to be opened after qualification.

This Tender and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Tender you receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely “Prevention of Corruption Act 1988”.

We hereby confirm that this Tender complies with the Tender validity and Earnest money deposit required by the Tender documents.

We attach herewith our current income-tax clearance certificate.

Yours faithfully,

Authorized Signature:

Name & Title of Signatory:

_____

Name of Tenderer _____

Address: ----------

Letter of Acceptance
(letterhead paper of the Employer)

_____[date]

To: _____[name and address of the Contractor]

Dear Sirs,

This is to notify you that your Tender dated _____ for execution of the _____[name of the contract and identification number, as given in the Instructions to Tenderers] for the Contract Price of Rupees _____ —— _____ (_____) [amount in words and figures], as corrected and modified in accordance with the Instructions to Tenderers is hereby accepted by our Agency.

You are hereby requested to furnish Security deposit plus additional security for unbalanced tenders in terms of Clause 25.5 of ITT, in the form detailed in Clause 29.1 of ITT for an amount of Rs.——————— within 20 days of the receipt of this letter of acceptance valid up to 30 days from the date of expiry of Defects Liability Period i.e. up to ..... and sign the contract, failing which action as stated in Para 29.4 of ITT will be taken.

Yours faithfully,

Authorized Signature
Name and Title of Signatory
Name of Agency

Issue of Notice to proceed with the work
(letterhead of the Employer)

——————— (date)

To
——————————————— (name and address of the Contractor)
———————————————
———————————————

Dear Sirs:

Pursuant to your furnishing the requisite security deposit as stipulated in ITT Clause 29.1 and signing of the contract agreement for the construction of ——————— [name of the contract] a Tender Price of Rs.———————, you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory authorized to sign on behalf of Employer)

Agreement Form
Agreement

This agreement, made the _____day of _____20_____, between_____ _____[name and address of Employer] (hereinafter called "the Employer") of the one part and _____ _____ _____ _____ _____[name and address of contractor] (hereinafter called "the Contractor") of the other part.

Whereas the Employer is desirous that the Contractor execute _____ _____[name and identification number of Contract] (hereinafter called "the Works") and the Employer has accepted the Tender by the Contractor for the execution and completion of such Works and the remedying of any defects therein at a contract price of Rupees.....

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.

3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
   i) Letter of Acceptance;
   ii) Notice to proceed with the works;
   iii) Contractor's Tender;
   iv) Contract Data;
   v) Conditions of contract (including Special Conditions of Contract);
   vi) Specifications;
   vii) Drawings;
   viii) Bill of Quantities; and

ix) Any other document listed in the Contract Data as forming part of the contract.

Whereas, the parties now mutually agree to the following conditions of Contract.

5. Jurisdiction of Courts/Arbitration: The Sitting of arbitration shall be held at Bangalore only and nowhere else.
6. Dispute of any kind arising out of the contract shall be resolved within the jurisdiction of Bangalore city only and the parties agree and clearly understand that the courts/ tribunals situated at Bangalore Metropolitan City have exclusive jurisdiction for the redressal of the disputes arising out of the contract and at no other place.
7. The parties further agree and understand that the place or places of issue of bank guarantee other than Bangalore will have no jurisdiction to resolve dispute of any kind relating to enforcement of the bank guarantees submitted by the contractor at Bangalore for the execution of the contract at Bangalore.
8. The contractor shall comply with all the legal requirements in the matter of employment of workmen and provide all safety gadgets to the workmen while working in the hazards place of conditions during the execution of the contract.
9. Contractor shall be fully responsible in the event of death of employee/ workman during the execution of the work and liable to pay adequate compensation to the dependants of employee/ workman as per law.
10. On his/ their failure, if the Board is made to pay compensation the same shall be recovered by the Board from the contractor out of the amounts due to the contractor or by appropriate legal action.
11. If death of any employees occurs during execution of work due to negligence of contractor, the contract will be liable for termination.
12. In the event of such termination, the employer may consider blacklisting of firm after due notice.
13. In case of any death or accident the contract will be cancelled after following due process.
14. The Board will be entitled to claim exemplary damages from the contractor in case of death of any work man / employees of the contractor in any of the BWSSB works as it damages the reputation of

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____
was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____
in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____

SECTION 5: CONDITIONS OF CONTRACT

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Conditions of Contract

A. General

1. Definitions

1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Bold letters are used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Tender.

Compensation events are those defined in Clause 38 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Employer in accordance with Sub Clause 46.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.2 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body whose Tender to carry out the Works has been accepted by the Employer.

The **Contractor's Tender** is the completed Tender document submitted by the Contractor to the Employer.

The **Contract price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A **Defect** is any part of the Works not completed in accordance with the Contract.

The **Defects liability period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Employer by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Employer.

The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

A **Variation** is an instruction given by the Employer which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Employer will provide instructions clarifying queries about the Conditions of Contract.

2.2 The documents forming the Contract shall be interpreted in the following order of priority:

(1) Agreement
(2) Letter of Acceptance, notice to proceed with the works
(3) Contractor’s Tender
(4) Contract Data
(5) Conditions of Contract
(6) Specifications
(7) Drawings
(8) Bill of quantities and
(9) any other document listed in the Contract Data as forming part of the Contract.

3. Law governing contract

3.1 The law governing the Contract is the Laws of India supplanted by the Karnataka Local Acts.

4. Employer's decisions

4.1 Except where otherwise specifically stated, the Employer will decide contractual matters between the Employer and the Contractor.

5. Delegation

5.1 The Employer may delegate any of his duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Employer but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer.

9. Personnel

9.1 The Contractor shall employ the technical personnel (of number and qualifications) as may be stipulated by GOK from time to time during the execution of the work. The technical staff so employed shall be available at site as may be stipulated by the Employer.

9.2 If the Employer asks the Contractor to remove a person who is a member of the Contractor’s staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Employer’s and Contractor's risks

10.1 The Employer carries the risks which this Contract states are Employer’s risks, and the Contractor carries the risks which this Contract states are Contractor’s risks.

11. Employer's risks

11.1 The Employer is responsible for the excepted risks which are:

(a) Rebellion, riot commotion or disorder unless solely restricted to employees of the Contractor or his Sub-Contractors arising from the conduct of the Works; or

(b) A cause due solely to the design of the Works, other than the Contractor’s design; or

(c) any operation of the forces of nature (in so far as it occurs on the Site) which an experienced contractor:

(i) could not have reasonably foreseen; or

(ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures;

(A) prevent loss or damage to physical property from occurring by taking appropriate measures or

(B) insure against such loss or damage

12. Contractor’s risks

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

13. Insurance:

13.1 The Contractor shall prior to commencing the works, effect and thereafter maintain insurances , in the joint names of the Employer and the Contractor, (cover from the first working day after the Start Date to the end of Defects Liability Period), in the amounts stated in the Contract Data :

(a) for loss of or damage to the Works, Plants and Materials and the Contractor's equipment;

(b) for liability of both Parties for loss, damage, death and injury to third parties or their property arising out of the Contractor's performance of the Contract including the Contractor's liability for damage to the Employer's property other than the Works and

(c) for liability of both Parties and of any Employer's representative for death and injury to the Contractor's personnel except to the extent that liability arises from the negligence of the Employer, any Employer's representative or their Employees.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Employer for his approval before the Start Date. All such insurance shall provide for compensation to be payable to rectify the loss or damage incurred. All payments received from insurers relating to loss or damage shall be held jointly by the Parties and used for the repair of the loss or damage or as compensation for loss or damage that is not to be repaired.

13.3 If the Contractor fails to effect or keep in force any of the insurances referred to in the previous sub-clauses or fails to provide satisfactory evidence, policies or receipts, the Employer may without prejudice to any other right or remedy, effect insurance for the cover relevant to such default and pay the premiums due and recover the same as a deduction from any other monies due to the Contractor. If no payments is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Employer.

13.5 Both Parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports:

14.1 The Contractor, in preparing the tender, shall rely on any site investigation reports referred to in the Contract data, supplemented by any information available to the Tenderer.

15. Queries about the Contract Data

15.1 The Employer will clarify queries on the Contract Data.

16. Contractor to construct the Works

16.1 The Contractor shall construct the Works in accordance with the Specification and Drawings.

17. The Works to be completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Employer, and complete them by the Intended Completion Date.

18. Approval by the Employer:

18.1 The Contractor shall submit Specification and drawings showing the proposed Temporary Works to the Employer, who is to approve them if they comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for the design of Temporary Works

18.3 The Employer’s approval shall not alter the Contractor’s responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to the design of third parties to the design of the temporary Works where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Employer before their use.

19. Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Employer of such discoveries and carry out the Employer's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

22. Access to the Site

22.1 The Contractor shall allow the Employer and any person authorized by the Employer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23. Instructions

23.1 The Contractor shall carry out all instructions of the Employer which comply with the applicable laws where the Site is located.

24. Procedure for resolution of Disputes:

24.1 If the Contractor is not satisfied with the decision taken by the Employer, the dispute shall be referred by either party to Arbitration within 30 days of the notification of the Employer’s decision.

24.2 If neither party refers the dispute to Arbitration within the above 30 days, the Employer’s decision will be final and binding.

24.3 The Arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

B. Time Control

25. Program

25.1 Within the time stated in the Contract Data the Contractor shall submit to the Employer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works.

25.2 The Employer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Employer again at any time. A revised Program is to show the effect of Variations and Compensation Events.

26. Extension of the Intended Completion Date

26.1 The Employer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date.

26.2 The Employer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Employer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information.

27. Delays ordered by the Employer

27.1 The Employer may instruct the Contractor to delay the start or progress of any activity within the Works.

28. Management meetings

28.1 The Employer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the progress achieved and the plans for remaining work.

28.2 The responsibility of the parties for actions to be taken is to be decided by the Employer either at the management meeting or after the management meeting and stated in writing to be distributed to all who attended the meeting.

C. Quality Control

29. Identifying defects

29.1 The Employer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Employer may instruct the Contractor to search for a

Defect and to uncover and test any work that the Employer considers may have a Defect

30. Tests

30.1 If the Employer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

31. Correction of defects

31.1 The Employer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

31.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Employer's notice.

32. Uncorrected defects

32.1 If the Contractor has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. Cost Control

33. Bill of Quantities (BOQ)

33.1 The BOQ shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

33.2 The BOQ is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the BOQ for each item

34. Variations

34.1 The Employer shall have power to order the Contractor to do any or all of the following as considered necessary or advisable during the progress of the work by him

(a) Increase or decrease of any item of work included in the Bill of Quantities (BOQ);
(b) Omit any item of work;
(c) Change the character or quality or kind of any item of work;
(d) Change the levels, lines, positions and dimensions of any part of the work;
(e) Execute additional items of work of any kind necessary for the completion of the works; and
(f) Change in any specified sequence, methods or timing of construction of any part of the work.

34.2 The Contractor shall be bound to carry out the work in accordance with any instructions in this connection, which may be given to him in writing by the Employer and such alteration shall not vitiate or invalidate the contract.

34.3 Variations shall not be made by the Contractor without an order in writing by the Employer, provided that no order in writing shall be required for increase or decrease in the quantity of an item appearing in the BOQ so long as the work executed conforms to the approved drawings.

34.4 The Contractor shall promptly request in writing the Employer to confirm verbal orders and if no such confirmation is received within 15days of request, it shall be deemed to be an order in writing by the Employer.

35. Payments for Variations

35.1 Payment for increase in the quantities of an item in the BOQ up to 25% of that provided in the Bill of Quantities shall be made at the rates quoted by the Contractor.

35.2 For quantities in excess of 125% of the tendered quantity of an item as given in the BOQ, the Contractor shall be paid at the rate entered in or derived from in the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract.

35.3 If there is no rate for the additional, substituted or altered item of the work in the BOQ, efforts would be made to derive the rates from those given in the BOQ or the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) and if found feasible the payment would be made at the derived rate for the item plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract

35.4 If the rates for additional, substituted or altered item of work cannot be determined either as at 35.1 or 35.2 or 35.3 above, the Contractor shall be requested to submit his quotation for the items supported by analysis of the rate or rates claimed, within 7 days.

35.5 If the Contractor's quotation is determined unreasonable, the Employer may order the Variation and make a change to the Contract Price which shall be based on Employer’s own forecast of the effects of the Variation on the Contractor's costs.

35.6 If the Employer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

35.7 Under no circumstances the Contractor shall suspend the work on the plea of non-settlement of rates for items falling under this Clause.

36. Submission of bills for payment

36.1 The Contractor shall submit to the Employer monthly bills of the value of the work completed less the cumulative amount paid previously.

36.2 The Employer shall check the Contractor's bill and determine the value of the work executed which shall comprise of (i) value of the quantities of the items

in the BOQ completed and (ii) valuation of Variations and Compensation Events.

36.3 The Employer may exclude any item paid in a previous bill or reduce the proportion of any item previously paid in the light of later information.

37. Payments

37.1 Payments shall be adjusted for deductions for advance payments, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the within **60 days** of submission of bill. The Contractor shall be liable to pay liquidated damages for shortfall in progress. For Progress beyond the agreed Programme, payment is subject to availability of the grants.

37.2 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

38. Compensation events

38.1 The following are Compensation events unless they are caused by the Contractor:

(a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.
(b) The Employer orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.
(c) The Employer instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
(d) The Employer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
(e) The effect on the Contractor of any of the Employer’s Risks.
(f) The Employer unreasonably delays issuing a Certificate of Completion.
(g) Other Compensation Events listed in the Contract Data or mentioned in the Contract.

38.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Employer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

38.3 As soon as information demonstrating the effect of each Compensation event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Employer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Employer shall adjust the Contract Price based on Employer’s own forecast. The Employer will assume that the Contractor will react competently and promptly to the event.

38.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Employer.

39. Tax

39.1 Taxes, Duties and other Levies:

a) The selected bidder will be fully responsible for all applicable taxes, duties, license fees, etc. incurred in relation to the work. They must cover the taxes that may be imposed on their own personnel or any of their employees' earnings and will be expected to protect the employer from any potential claims made against them. The selected bidder must indemnify and hold the employer harmless against any such claims.

b) According to Commercial Tax Department Notification No.12/2017, all services are subject to a nil rate of GST under the definition of a pure service. The quoted rate should exclude the GST, which will be charged separately as per the prevailing applicable laws.

c) BWSSB does not assume any responsibility for taxes under the Indian Income Tax Act, 1961 for the selected bidder(s) or their personnel. In accordance with the provisions of the Indian Income Tax Act, 1961, if necessary, BWSSB will make deductions for Income Tax at source. The applicable tax at the prevailing rate will be included over and above the quoted price.

If the Amount put to tender is exclusive of GST

GST and TDS Clause:
Prevailing GST:
The prevailing Goods and Services Tax (GST) rate is 18% as per the current taxation regulations. The GST amount is not included in the bid amount put forward by the bidder but will be applicable in addition to the awarded contract cost.

TDS Deduction:
As per the GST notification, a Tax Deducted at Source (TDS) of 2% shall be deducted by the client while making payments for the bills raised by the bidder.

Submission of Security Deposit:
Upon issuance of the Letter of Award (LOA) at the award cost, including GST, the successful bidder shall be required to submit the entire security deposit, comprising the applicable GST amount as well.

Invoicing and Tax Compliance:
The successful bidder shall adhere to all relevant GST regulations and guidelines while invoicing for the work contract. The invoice/bills provided by the bidder should clearly indicate the applicable GST rate, along with the tax registration details, and comply with all legal requirements as specified by the GST authorities.

Changes in GST Rate:
In the event of any change in the GST rate during the execution of the contract, the responsibility of updating the invoicing and pricing structure to reflect the revised GST rate shall lie with the bidder. The contract shall

remain in force, and both parties shall abide by the new GST rate as per the applicable law.

GST Documentation:
The bidder is required to provide all necessary GST-related documentation, such as tax invoices, payment receipts, and any other documents requested by the contracting authority, in a timely and accurate manner.

Any disputes or issues related to GST:
In case of any disputes or issues related to GST compliance, the bidder shall be responsible for resolving such matters with the appropriate tax authorities. The contracting authority shall not bear any liability for any non-compliance or discrepancies related to GST.

This provision is an integral part of the bid document, and all bidders are requested to thoroughly review and acknowledge their understanding and compliance with the prevailing GST rate of 18% before submitting their bids

40. Price Adjustment:

DELETED

41. Liquidated damages

41.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the Contract Data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages does not affect the Contractor's liabilities.

41.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment of bill.

42. DELETED

43. Securities:

43.1 The Security deposit (including additional security for unbalanced tenders) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and type of instrument acceptable to the Employer. The Security deposit shall be valid until a date 30 days from the date of expiry of Defects Liability Period and the additional security for unbalanced tenders shall be valid until a date 30 days from the date of issue of the certificate of completion.

44. Cost of Repairs:

44.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be

remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

45. Completion

45.1 The Contractor shall request the Employer to issue a Certificate of Completion of the Works and the Employer will do so upon deciding that the Work is completed.

46. Taking over

46.1 The Employer shall take over the Site and the Works within seven days of issuing a certificate of Completion.

47. Final account

47.1 The Contractor shall supply to the Employer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 90 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer shall issue within 90 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Employer shall decide on the amount payable to the Contractor and make payment within 60 days of receiving the Contractor's revised account.

48. As built drawings and /or Operating and Maintenance Manuals

48.1 If "as built"[1] Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

48.2 If the Contractor does not supply the Drawings by the dates stated in the Contract Data, or they do not receive the Employer's approval, the Employer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

49. Termination

49.1 The Employer may terminate the Contract if the other party causes a fundamental breach of the Contract.

49.2 Fundamental breaches of Contract include, but shall not be limited to the following:

(a) the Contractor stops work for 45 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Employer;

(b) the Employer instructs the Contractor to delay the progress of works and the instruction is not withdrawn within 60 days;

[1] Completion Drawings

(c) The Contractor becomes bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

(d) a payment due to the Contractor is not paid by the Employer within 90 days of the date of the submission of the bill by the Contractor.

(e) the Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Employer;

(f) the Contractor does not maintain a security which is required;

(g) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and

(h) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract. For the purpose of this paragraph : “corrupt practice” means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.”

49.3 When either party to the Contract gives notice of a breach of contract to the Employer for a cause other than those listed under Sub Clause 49.2 above, the Employer shall decide whether the breach is fundamental or not.

49.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

49.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

50. Payment upon Termination

50.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Employer shall prepare bill for the value of the work done less advance payments received up to the date of the bill, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

50.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Employer shall prepare bill for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract, and less taxes due to be deducted at source as per applicable law and make payment accordingly.

51. Property

51.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

52. Release from performance

52.1 If the Contract is frustrated by any event entirely outside the control of either the Employer or the Contractor the Employer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

F. Special Conditions of Contract

1. Labour :

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Employer, deliver to the Employer a return in detail, in such form and at such intervals as the Employer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Employer may require.

2. Compliance with labour regulations:

During continuance of the contract, the Contractor and his sub contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any,

on the part of the Contractor, Employer shall have the right to deduct any money due to the Contractor including his amount of security deposit. The Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

3. Protection of Environment:

The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

4. Arbitration (Clause 24)

4.1 The procedure for arbitration shall be as follows:

(a) In case of dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this agreement it shall be settled in accordance with the Arbitration and Conciliation Act 1996. The disputes or differences shall be referred to a Sole Arbitrator. The Sole Arbitrator shall be appointed by agreement between the parties; failing such agreement, by the Appointing Authority (any one of the Organizations as per list enclosed in Annexure)

(b) Arbitration proceedings shall be held at ***Bangalore***, Karnataka, India

(c) The cost and expenses of arbitration proceedings will be paid as determined by the Arbitrator. However the expenses incurred by each party in connection with the preparation, presentation, etc., shall be borne by each party itself.

(d) Performance under the contract shall continue during the arbitration proceedings and payments due the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

5 Contractor to Co-ordinate his Work with Other Contractors

5.1 The Contractor has to co-ordinate with the other concerned Contractors as already specified in Conditions of Contract for all such works as per the directions of Engineer in charge at no extra cost.

6 **Continuation of Work:**

6.1 In case of the death of a contractor after executing the agreement / commencement of the work, his legal heir, if any eligible registered contractor and willing, can execute and complete the work at the accepted tender rates irrespective of the cost of the work

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SECTION 6:
CONTRACT DATA

Items marked "N/A" do not apply in this Contract.

The following documents are also part of the Contract:

- The Schedule of Operating and Maintenance Manuals
- The Methodology and Program of Construction
- Site Investigation Reports
- The Schedule of Key and Critical Equipment to be deployed on the work as per agreed program of construction.

The Employer is :

Name: Bangalore Water Supply and Sewerage Board represented by **Chief Engineer (Waste Water Management-E)**

Address: Bangalore Water Supply & Sewerage Board
5th Floor, Cauvery Bhavan D-Block,
K.G. Road, Bangalore 560009

Name of authorized Representative: Executive Engineer (WWM-STP-CV)
Bangalore Water Supply & Sewerage Board
Shimsha bhavana, first floor,46th cross
Jayanagar 8th Block,
Bangalore-560082

The name and identification number of the Contract is :	Work of Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the period of 3 years. **(2nd call)**

The start date shall be the date of issue of notice to proceed with the work.

The Intended Completion Date for the whole of the Works is **3 Years**

The Site possession date is the day of issue of notice to proceed with the work
The Site location is defined in drawing.

The Defects Liability Period is 365 days.

Insurance requirements are as under:

Type of Cover		Minimum Cover for Insurance
(i)	Works , Plant and materials	The sum stated in the Agreement plus 20%
(ii)	Loss or damage to equipment	Full replacement cost
(iii)	Loss or damage to property of Third Party	Full replacement cost
(iv)	Personal injury or death insurance (a) for Third Party	Rs.20 lakhs to cover 4 persons @ Rs.5 lakhs each
	(b) for Contractor's employees or labour	In accordance with the statutory requirements applicable to Karnataka

Price Adjustment Formula; [40]

DELETED

The liquidated damages for the whole of the works are Rs. ***0.1%*** per day of the contract value and that for the milestones are as under:

The maximum amount of liquidated damages for the whole of the works is ***ten*** percent of final contract price.

The amounts of the advance payment are:

[42]

Not Used

Repayment of advance payment for mobilization: [42]

Not Used

The date by which “as-built” drawings (in suitable scale) in 2 sets are required is within 30 days of issue of certificate of completion of Whole or Section of the Work as the case may be.

[48]

The date by which Operating and Maintenance Manuals are required is within 30 days of issue of certificate of completion of Whole or Section of the Work as the case may be.

[48]

The amount to be withheld for failing to supply “as built” The amount sufficient to get the completion drawings or Operating and Maintenance Manuals prepared by alternative agency in case the contractor fails to submit. Drawings or supply of Operation and Maintenance Manuals by the date required is Rs.2.00 lakhs

[48]

The following events shall also be fundamental breach of the contract:

[49.2]

1. The contractor has contravened Sub-clause 7.1 and Clause 9 of CC.

The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be sufficient to get the balance of works completed by alternative agency.
[50.1]

Sd/-

Chief Engineer
(Waste Water Management-E)

SECTION 7: SPECIFICATIONS

GENERAL STIPULATIONS AND CONDITIONS

1. DEFINTIONS

In this contract the following words shall be understood as having the meanings herein assigned to them.

a) "The Board" means the Bangalore Water Supply And Sewerage Board a statutory body constituted under Bangalore Water Supply And Sewerage Board Act 1964 having its office at Cauvery Bhavan, K. G. Road, Bangalore 560 009 and any officer duly authorised by this Board to act on its behalf.
b) "Operator" means the person or persons or firm or company contracting for the work specified including his or their executors or administrators or legal representatives or successors.
c) "Owner's Representative" means Chief Engineer or any other Owner's Representative appointed from time to time by the Board to act as such in connection with these works. Whenever and work is specified to be done or material supplied to the satisfaction of the Owner's Representative it shall be taken as including his properly authorized assistants and duly authorized representatives.
d) "Works" means Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the next period of Three Years
e) "Contract" means these conditions of the contract, the Tender, the Operator's proposal, the Letter of Acceptance, the contract Agreement, O&M manual.
f) "Tender" means the Operator's priced offer to the Owner for the Operation and Maintenance of the treatment plant.
g) "Operator's Proposal" means the Operator's proposals and methodology for the operation and maintenance of the treatment plant.
h) "Letter of Acceptance" means the formal acceptance of the tender by the owner.

i) “Contract Agreement” means the contract agreement in the form agreed between the parties to record the contract. The cost of stamp charges and similar charges imposed by law shall be borne by the Operator.

j) Persons

   i) “Owner” means the person named in Sub Clause 3 and the legal successors in title such person, but not any assignee of such person.

   ii) “Operator” means the person whose Tender has been accepted by the owner and the legal successors in title to such person, but not any assignee of such person.

   iii) “Owner Representative” means the person appointed by the Owner to act as Owner’s representative for the purposes of the contract as named in sub clause 4, or other person appointed from time to time by the Owner and notified as such to the operator.

   iv) “Operator Representative” means the person appointed from time to time by the Operator.

k) Dates, Times and Periods

   i) “Effective Date” means the date on which the contract entered into legal force and effect.

   ii) “Commencement Date” means the date on which the Operator receives the notice to commence issued by the Owner's Representative.

   iii) “Contract Period” means the period from the commencement date to the date after 10 years.

   iv) “Month” means a calendar month and “Year” means 365 days.

l) “Monthly Lump Sum Rate” means the rate stated in the Letter of Acceptance payable to the Operator each month for the Operation and Maintenance of the treatment plant.

m) “Variation” means any alteration and/ or modification to the requirements of the contract which is instructed by the Owner’s Representative..

n) “Law” means the Law of Republic of India.

o) Priority of Documents

The documents forming the contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, the

Owner’s Representative shall issue any necessary clarification to the Operator, and the priority of the documents shall be as follows.

1) Letter of Acceptance,
2) Conditions of Contract,
3) Tender,
4) Operator’s proposal.

p) Communications

Whenever in the contract provision is made for the giving or issue of any notice, consent, approval, certification, instruction or determination by any person, unless otherwise specified such any notice. Consent, approval, certificate, instruction or determination shall be in writing and the words ‘notify’, ‘certify’, ‘instruct’ and ‘determine’ shall be constructed accordingly. Any such consent, approval, certificate or determination shall not unreasonably withheld or delayed.

2. COMMENCEMENT OF THE CONTRACT AND THE CONTRACT PERIOD

The O & M contract shall commence upon the written instruction of the Owner or the Owner’s Representative. The Operator shall mobilize sufficient staff within 14 days to commence the Operation and Maintenance of the treatment plant. The Operator shall operate and maintain the treatment plant and pumping station for10 years.

3. OWNER

The Executive Owner’s Representative Executive Engineer (Wastewater Management) - 3 will manage day-to-day operation of the treatment plant. For the purpose of this contract, Chief Engineer (WWM) will be the Owner and EE (STP) – K V will be the Owner’s Representative.

4. THE OWNER’S REPRESENTATIVE

4.1 Owner’s Representative’s Duties and Authority

The Owner’s Representative shall carry out the duties specified in the contract. The Owner’s Representative shall have no authority to amend the contract or to relive the Operator of any of his duties, obligations and responsibilities under the contract. Any proposal, inspection, consent, approval or similar act by the Owner’s Representative shall not relive the Operator of any of his responsibilities, including responsibility for his errors, omissions, discrepancies.

4.2 Owner’s Representative’s Authority to Delegate

The Owner’s Representative may from time to time delegate any of his power to assistants and may at any time revoke such delegation. Any such delegation or revocation shall be in writing, specifying the powers, functions and authorities being delegated or revoked, and shall not take effect until a copy has been delivered to the Owner and the Operator.

Any determination, instruction, inspection, examination, testing, consent, approval or similar act by any assistant of the Owner’s Representative, in accordance with the delegation, shall have the same effect though it had been an act of the Owner’s Representative. However, any failure to disapprove any procedures, inspections, testing etc., shall not prejudice the right of the Owner’s Representative to reject such procedure, inspection, testing etc. If the Operator questions any determination or instruction of an assistant of the Owner’s Representative, the Operator may refer the matter to the Owner’s Representative, who shall confirm, reverse or vary such determination or instruction.

4.3 Owner’s Representative’s Instruction

Unless it is legally or physically impossible, the Operator shall comply with instructions given by the Owner’s Representative in accordance with the contract. In particular, the Operator shall follow the Owner’s Representative’s instructions on BWSSB’s requirements regarding the output of the treatment plant, the disposal of screenings, the disposal of sludge etc.,

4.4 Liaison with the Owner’s Representative

The Operator will liaise with the Owner's Representative on all issues affecting the Operation and Maintenance of the treatment plant and shall submit daily records and monthly reports to him, with copies to the Owner.

From time to time, the Operator will attend meetings with the Owner and the Owner's Representative to review the Operation and Maintenance of the treatment plant.

The Owner or the Owner's Representative or any of the Owner's Representative's authorized assistants shall have the right of access to inspect any part of the treatment plant at any time, including access to the Operator's records. The Operator shall provide all necessary facilities to enable such inspection.

4.5 Owner's Representative to attempt Agreement

When the Owner's Representative is required to determine value, cost etc., he shall consult with the Operator in an endeavor to reach agreement. If agreement is not reached, the Owner's Representative shall determine the matter fairly, reasonably and in accordance with the contract.

5. THE OPERATOR

5.1 The Operator will be responsible for the daily operation of the treatment plant and pumping station, 24 hours per day in three shifts of 8 hours each to treat the wastewater flowing into the treatment plant. The Operator shall optimize the operation of the treatment plant in most effective manner in terms of the consumption of power, spares and consumables.

5.2 The Operator shall be totally responsible for the maintenance of the treatment plant to ensure the reliability of the process operations as well as the longevity of the plant and structures, comprising the treatment plant, so that these items are handed back to the Owner in good working condition, except for fair wear and tear.

5.3 The Operator shall provide all superintendence, labour, materials, and consumables, under take all minor and major repair required for the operation and maintenance of the treatment plant.

5.4 The Operator shall not sublet or assign any part of the contract without the written permission of the Owner. The man power required for the day to day operation may be taken on contract basis from any agency who are capable of providing the same except for the Plant Manager/ Process Engineer. If man power is on contract basis, the Operator is solely responsible for the day to day Operation and Maintenance of the plant. Hired agency will not be held responsible for the O & M.

The statutory requirements such as PF, ESI shall be paid to the concerned either by the Operator or the hired agency. The operator shall indemnify the Board from any legal action against the nonpayment of statutory requirements. In case the hired agency is paying the statutory requirements, then the Operator shall make sure that the payments are made to the concerned departments within the due date. The monthly bills will be admitted only after the receipts for having made the required payments are submitted and enclosed to the bills. The operator is also responsible for the welfare of the labourers engaged in the O & M of the plant.

5.5 Quality Assurance

The Operator shall institute a quality assurance system to demonstrate compliance with the requirements of the contract. Compliance with the quality assurance system shall not relieve the Operator of his obligations, duties and responsibilities under this contract. Details of all procedures and compliance documents shall be submitted to the Owner’s Representative for his information. Signed quality assurance statements for such reports shall accompany the Operator’s monthly reports to the Owner’s Representative. The Owner’s Representative shall be entitled to audit any aspect of the system and require any remedial action to be taken.

5.6 Matters affecting the Operation and Maintenance of the treatment plant

The Operator shall be deemed to have taken account of the conditions, which may prevail, and of facilities available to him, when he takes possession of the treatment plant from the Owner and all risks, contingencies and other circumstances, which may affect or influence his contract price. The Operator shall be deemed to have satisfied himself as to the correctness and sufficiency of his prices, which shall cover all his obligations under this contract. The Operator shall provide at his own cost any tools, tackles and equipment, replacement parts etc., necessary for the satisfactory operation and maintenance of the treatment plant.

5.7 Inception Report

The Operator shall submit to the Owner's Representative within 28 days of the commencement of the contract a detailed description of the arrangements and methods, which the Operator proposes to adopt for the execution of the contract showing how he will operate and maintain the treatment plant. This inception report shall be in amplification of the Operator's Tender proposal and Operator shall not reduce the scope of the services offered therein. The report shall cover the following.

i) Staffing – Staff and labour organization (including organization chart), staff and skilled labour qualifications, schedules of responsibilities, training programs, administration and monitoring.
ii) Operations – Operations management and planning, operating instructions and procedure manuals, receiving and monitoring consumables, laboratory testing and quality monitoring, procedures for emergency conditions such as fire etc.,
iii) Maintenance – Maintenance planning, maintenance management, work control including preventive and corrective maintenance and outage planning.
iv) Compliance – efficiency and performance monitoring, performance testing, quality control etc.,

No significant alteration shall be made to such arrangements and methods without the approval of the Owner's Representative.

5.8 Monthly Reports

The Operator shall prepare and submit monthly reports to the Owner's Representative for the three works included in this tender, in four copies and within 10 days of the next month. The report shall describe the operation and maintenance of the treatment plant with copies of the records submitted to the Owner's Representative including the summaries of the record in tabular and graphical form. The report shall include a section describing the performance in terms of compliance with the requirement of the contract. The Operator shall make available all supporting documents, records etc., to the Owner's Representative if required to do so.

The report shall be in a form approved by the Owner's Representative to cover

i) Operation – Records of inflow
ii) Maintenance – A list of plant break down, spares consumed, minor and major repairs carried out, schedule of maintenance carried out during the month etc.,
iii) Staff, Skilled labour and unskilled labour – number of staff utilised, training programme conducted if any, performance evaluation made if any etc.,
iv) Safety – Brief reports of all accidents and hazardous incidents including description of cause, extent of damage, action taken and precautions taken to prevent the repetition.
v) Inspection reports of Routine / daily / weekly / monthly/ quarterly/ half yearly/ yearly
vi) Any other relevant information connected with

6. SCOPE OF THE CONTRACT

This contract comprises the Comprehensive Operation and Maintenance of 4 MLD TTP at Cubbon Park (Membrane Technology) for the next period of Three Years or mentioned in these specifications and in the schedule hereto, annexed and all extra works which may be ordered under the powers herein contained. The specifications, schedules etc., are to be considered as explanatory of each other and no advantage shall be taken of any omission in any of these documents. Even

though the quantity of wastewater to be increased/ decreased at any point of time as directed by the Owner's Representative.

7. OBLIGATIONS OF THE BOARD
   a) Cost of BESCOM power will be paid directly to BESCOM.
   b) Ensuring that all equipments and tanks are in good working condition before handing over the Plant. This could be decided by a joint inspection.
   c) To conduct surprise checks. For this purpose Board may nominate any of its officers for inspection without prior notices.
   d) Payments will be made on receipt of bills from the Operator once in a month.

8. DISCREPANCIES AND OMISSIONS
   a) Should any discrepancy appear in any of the documents included in the contract or between different parts of the same documents or ambiguity or insufficiency of information; the Operator shall point out the same to the Owner's Representative in writing and receive his instructions, explanation or decision in the matter, before beginning the work in question.
   b) In the event of anything reasonably necessary or proper to the due and complete performance of the work (of which the Owner's Representative shall be sole judge) being omitted to be shown or described in the specification and schedules the Operator shall notwithstanding execute and provide at the rates noted in the bills all such omitted works and things as if they had been severally shown and described and according to the directions of the Owner's Representative and to his satisfaction.

9. SCHEDULE (BILL OF QUANTITIES)

The Operator shall not be held responsible for the accuracy of the schedules hereto attached but only for the accuracy of the prices, amounts and totals therein appearing. The rate for each item of the work in the schedule shall be inclusive of the costs and charges of all material, labour, tools and plant necessary for the full and complete execution of the work as described in the specification and schedule

unless otherwise specified and for the due fulfillment of all the requirements relating thereto as specified in the contract. If any error, omission or misstatement shall be discovered in the said quantities the same shall not vitiate the contract for release the Operator from execution and completion of the whole or any part of the said works or form any obligations or liabilities of the Operator under this contract or entitled the Operator to any damages or compensation from the Board.

10. PREPARATION OF CERTIFICATES

In preparing the interim or final certificates of payment to the Operator, the Owner's Representative shall take into account the total included in this contract as set out in the priced bills and should it appear after measurement that these works have been exceeded, he shall certify for the amount so executed in excess at several appropriate prices or rates in the said bills.

11. NET MEASUREMENT

Should the final measurement of work that the various works executed are less than those set out in the bills, the Owner's Representative shall in like manner deduct at appropriate rates the value of such difference from the total sum of the contract.

12. CONTRACT GENERAL EXPLANATION

The works under this contract and every addition, alteration or deviation directed to be executed under this contract or that may be necessary or proper to be done in order to perfect and complete the same, shall be executed by the Operator in the best and most substantial and workman like manner, with materials, of the best and approved quality of their respective kinds, according to particulars contained in or implied by the specifications and schedules hereto attached or such other additional particulars explanations as may be given or approved by the Owner's Representative and to full and entire satisfaction of the Owner's Representative, according to the instructions and directions from time to time given by the Owner's Representative. The Owner's Representative shall have full

liberty from time to time and at all times to inspect, examine and test the materials and workmanship and may at any time reject any or all of the materials or workmanship which may seem defective or unfit or improper for the several purposes they are applied or not in accordance with the said bills, specifications, instructions or directions.

13.OPERATOR'S LIABILITY

The Operator shall be absolutely and solely responsible for any and all kinds of injuries or damages to person and property of any description whatever may be caused by or result from the execution of the works, whether these may have been carried out skill fully and carefully and strictly in conformity with the provisions of the specifications or not.

14.OPERATOR TO BE RESPONSIBLE FOR ALL TREAPASSES AND DAMAGES

In the event of accident to any person including employees of the Board on duty, trespass on land, injury to cattle, horses or other animals or damage injury of any description to any person or thing arising out of the execution of the works, the Operator shall be held responsible for and make good the same and shall indemnify the Board from all claims or expenses on account thereof and if the Board has to pay any money in respect thereof the sum so paid and the costs incurred by the Board shall be charged to the Operator as so money paid to him on account of his contract and the Operator shall not be at liberty to dispute or question the right of the Board to make such payment for him or on his account notwithstanding the same may have been made without his consent of authority and decision determination in law or otherwise to the contrary notwithstanding. The Board shall not be liable to, or for in respect of any damages or compensation or claim therefore, under any Act for the time being in force or common law because or by reason or in consequences of any accident or injuries to workman or others in the employment of the Operator or any sub Operator or any person

acting under him or on his behalf or the staff/ persons employed by the Board for supervision of the work under his contract and the Operator shall save the Board harmless and indemnify in respect thereof and of any and all costs and expenses incident thereto or consequent thereon.

15.ACCESS TO WORK

The Operator shall inform himself of the number and nature of the existing roads and cart tracks available for access to the site of work and make due provision in the rate for any difficulty involved in carting labour and materials.

16.TEST

Every part of the works and all the materials to be used therein shall be subjected to such tests from time to time during the execution of the work as the Owner's Representative may direct the whole of such tests shall in all cases be made at the Operator's sole expense.

17.WORKS UNDER THE CONTROL OF THE OWNER'S REPRESENTATIVE WHO MAY REJECT MATERIALS OR WORKMANSHIP

The work shall be carried on and completed under the exclusive control, direction and supervision and to the satisfaction of the Owner's Representative. The Owner's Representative shall likewise have full power to reject or condemn any workmanship or materials that he may deem unsuitable. In case of any workmanship or materials being rejected by the Owner's Representative, the Operator shall immediately remove and replace the same to the satisfaction of the Owner's Representative, or the Owner's Representative is hereby authorized to remove and replace the same, deducting the value of the work rejected or material removed or the cost of replacing the same, as he may think proper, from any amount due or that may become due to the Operator.

18.OPERATOR'S SUPERVISION OF WORK

a) The Operator shall give or provide all necessary superintendence during execution of the works and as long thereafter as the Owner's Representative may consider necessary. Such superintendence shall be given by sufficient person having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) as may be requisite for the satisfactory performance of the contract.
b) Details of key personnel to be employed by the Operator.

19. BOARD MAY OCCUPY THE SITE AND EMPLOY OTHER OPERATORS

The Board expressly reserve to themselves the right to occupy for their own purposes of whatever kind, at any time and for so long a time as the Owner's Representative may notice in writing to the Operator require, any portion or portions of the site of the works whether the works to be executed thereon be commenced or be in progress or completed and to employ thereon agents and the workman other than the Operator in the execution of matter not subject of the contract and the Operator shall not obstruct such agents and workmen, but without extra charge and without relief from any liabilities or responsibilities incurred under the contract shall allow and provide them unmolested access thereto and such facilities as in the judgment of the Owner's Representative may, by him be reasonably demanded.

20. COMMENCEMENT OF WORK AND RATE OF PROGRESS

The Operator must commence, execute and complete with such expedition as the Owner's Representative shall require and in a manner satisfactory to the Owner's Representative all works for which he has accepted orders.

21. SKILLED WORKMEN TO BE EMPLOYED

The Operator shall employ only competent and skilled persons to do the work. The Operator shall furnish a list of key personnel, skilled and semi-skilled personnel

proposed to be employed by him for this plant with their name, educational qualification and experience in years at the time of signing the agreement. This list shall form part of the agreement. The Operator shall change any of the persons only with person of equal or higher qualification and experience after obtaining prior approval of the Owner's Representative.

Whenever the Owner's Representative has to inform him in writing that any person on the work is in his opinion unsatisfactory or incompetent or unfaithful or dishonest or untruthful or disorderly or otherwise unsuitable such person shall be discharged from the work and shall not be employed again on it.

22.ABSENCE OF THE OWNER'S REPRESENTATIVE

If and so often as it may happen that the Owner's Representative shall be absent from the works for any cause whatsoever the Owner's Representative shall act as the Owner's Representative during his absence or until the Board shall appoint some other person to act as such Owner's Representative and Owner's Representative or other person appointed as aforesaid as the case may be shall during the said absence of the Owner's Representative, have all the powers and duties relating to all the matters and things in connection with the works or any disputes and difference arising there from or in any way connected there with, as are conferred on the Owner's Representative by virtue of this contract.

23.NIGHT WORK

The works shall without extra charges be carried on day and night without intermission, should there be any cause, whatsoever which in the judgment of the Owner's Representative, shall require it.

24. MATERIALS, IMPLEMENTS AND LABOUR PROVIDED

Expect for such materials as are herein stated to be supplied by the Board, the Operator shall at his cost and charges furnish all materials and labour and everything necessary for the complete performance of this contract.

25. OWNER'S REPRESENTATIVE TO HAVE RIGHT TO INSPECT PLACES FROM WHERE MATERIALS ARE OBTAINED

All places wherein any materials are being made or obtained for the works and the whole of the process connected therewith and all the other operations of the Operator or any authorized sub - Operator, manufacturer or tradesman shall be open to the inspection and control of the Owner's Representative and all persons authorized by him at all times. The Operator has to furnish the test report, Manufacturers recommendations for the materials used for the performance of the contract. The Owner's Representative in his discretion shall have the right for replacement of Operator's staff who is found to be unfit to discharge the duties.

26. MATERIALS AND WORKMANSHIP INFERIOR WORK TO BE AMENDED PROCEEDINGS ON REFUSAL

If any material brought upon to the site of works or to the places where any operations have been or being carried out in connection with or for the purposes of the works, be in the judgment of the Owner's Representative, of an inferior or improper description or improper to be used in the works, the said materials or workmanship shall where required by the said officer be removed or amended by the Operator forthwith or within such period or every breach by the Operator of this clause, the Owner's Representative is hereby authorized to remove or cause to be removed the materials and workmanship so objected to or any part thereof, and replace the same with such other materials and workmanship as shall be satisfactory to him and there upon the Operator shall on demand repay to the Board the expense incurred thereby or to which the Board may be put or be liable in

connection therewith, the amount thereof to be certified by the Owner's Representative whose certificate shall be final.

27. OPERATOR NOT TO OCCUPY LAND ETC., AFTER NOTICE FROM THE OWNER'S REPRESENTATIVE

In no case, shall the Operator continue to use or occupy or allow to be used or occupied any land or property either for the deposit of materials or plant or for any purpose whatever after written notice from the Owner's Representative shall have been addressed to the Operator at his usual or last known place of abode or business and sent through the post offices or other modes of delivery requiring the Operator to remove or cause to be removed all such materials or plant from any such land or property as aforesaid or to give up vacant possession of such land or property to the Owner's Representative and should any such materials or plant remain upon any such land or property or shall any such land or property remain occupied or be used after such notice for any purpose whatsoever as aforesaid, then and in every such case and as often as the same shall happen the Operator shall forfeit and on demand pay to the Board the sum of Rs. 1000/- (One thousand only) per day as and for liquidated damages for each and every day during which the said lands or property are so used and occupied as aforesaid from the time such notice has been given.

28. RESPONSIBILITY FOR ACCIDENTS, DAMAGES ETC.,

The care of the whole of the permanent works shall remain with the Operator who shall be responsible for all accidents or damages from whatever cause arising and chargeable for anything that may be stolen, removed, destroyed, damaged to whomsoever belonging and also for making good all defects and damages to the said works or to any property adjoining or any cause whatever, whether such damage or defects were occasioned by the negligence of the Operator or not or may be or might

have been discovered during the progress to be known after the completion whereof or whether payment may wholly or partially have been made or the works approved as supposed to have been properly done and no certificate of approval of any works by any officers or members of the Board shall affect or prejudice the right of the Board against the Operator or be considered or held as at all conclusive as to the sufficiency of any works or materials.

29.SUSPENSION OF PROGRESS

The Operator shall without recompense claim or demand, delay or suspend the progress of the works or any part thereof, if and when and so often as required by the Owner's Representative and for such times as may in the judgment of the Owner's Representative be necessary for the purposes or advantages of the undertaking and shall whenever directed by the Owner's Representative and upon all needful occasions whether directed by the Owner's Representative and upon all needful occasions whether directed or not at the Operator's expense properly cover down and secure so much of the works as may be liable to sustain damage from weather or any other cause and shall at all times and forthwith when required properly make good to the satisfaction of the Owner's Representative all damages or injury which such works or any part thereof may have sustained.

30.RECOVERY ETC., OF MONEY PAYABLE TO BWSSB

All losses, costs, damages and expenses and other money payable to the Board by the Operator under any stipulation in this contract, may be retained out of any money then due or which may subsequently become due from the Board to the Operator under this or any other contract or otherwise howsoever and in case such money then due or to become due to the Operator by the Board shall be insufficient to pay such losses, costs, damages and other money payable to the Board by the Operator it shall be

lawful for the Board without any further consent on the part of the Operator to sell and dispose of any or all of the Government promissory notes or securities deposited with the Board by the Operator as aforesaid and with and out of the proceeds of such sale, after payment of all expenses connected therewith or reimburse and pay to the Board all such losses, costs, damages and expenses and other money payable to the Board by Operator and in case such proceeds of sale of the said Government promissory notes or securities shall be insufficient for such purpose then and in that case, shall be lawful for the Board to recover the residual thereof and if necessary legal proceedings would be initiated against the Operator.

31. BWSSB MAY TERMINATE THE CONTRACT IN CASE OF INSOLVENCY OR WANT OF DUE DILIGENCE

Should the Operator during the continuance of the contract die or become bankrupt or insolvent or go into liquidation or should he suspend payment or compound with his creditors or from any other cause whatever become unable or fail to carry on the contract with efficiency or should he not progress with any portion of the work assigned to him in the programme given by the Owner's Representative from time to time in the manner intended by the contract or not have work ready in conformity with the terms of the contracts or should his preparations for commencement and his subsequent rate of progress be slow from any cause whatever that be in the opinion of the Owner's Representative or his representative, he shall be unable to carry out the work by the expiration of the specified period or should he refuse or neglect to comply with the directions given to him by the Owner's Representative or his representative or in any other respect act contrary to the terms of the contract, the Board shall have power to declare the contract at an end in which case, the Operator shall only be paid for such portion of the work as shall have been actually delivered in a

serviceable condition at the date of such declaration after due deduction of any sum that may be leviable under this contract. The Operator shall in addition be liable to pay to the Board or the Board at their option shall be entitled to further deduct the amount of all losses, damages or expense (including any excess difference between the contract price of the works to be done under this contract or such portions thereof as may not have been delivered at the date of such declaration as aforesaid and the price which the Board may have to pay for the similar work provided in lieu of such portion as may not have been so delivered) which the Board may be put to or sustain by reason of in consequence of the Operator's breach of contract. The above liability shall be in addition to forfeiture of the retention money and the security deposit specified.

32. MEASUREMENT OF WORK

AE/ JE will measure the work monthly. Payment may be made on the monthly rate as per the agreement and based on the satisfactory compliance of the contract, as per schedule in the agreement. The Operator will be at liberty to accompany the AE/ JE in order that they may agree on the measurements but should he neglect to do so, the measurements as recorded by the said officers shall be taken as final and conclusive.

The recorded measurements will be paid once in month. The statutory deductions such as Income Tax, Work Contract Tax (if applicable) will be deducted in the R A bills in the prevailing rates.

33. PROTECTION AGAINST CLAIMS FOR THE USE OF PATENTS

All fees for any patented invention, articles or arrangement, that may be used or in any manner connected with the maintenance of the works or any part thereof embraced in these specifications, shall be included in the price mentioned in the bill of quantities and Operator shall protect and hold harmless the Board against any and all demand for such fees or claims and

before the final payment and settlement is made on account of this contract; the Operator, if required must furnish acceptable proof of proper and satisfactory release from all such claims.

34.AUDITS

Bangalore Water Supply And Sewerage Board may designate any responsible person to carry out an annual audit of a technical nature in relation to the operation and maintenance of the facilities, to visit and inspect the facilities with the Operator’s officers and staff, upon giving the Operator fourteen (14) days’ notice. Such audit shall be carried out at reasonable times and so as not to impede or otherwise delay the Operator in the performance of the services or its obligations under this contract.

35.PROTECTION OF THE ENVIRONMENT

The Operator shall take all reasonable steps to protect the environment (both on and off the site) and to limit the damage and nuisance to people and property resulting from pollution, noise and other results of his operations. The Operator shall ensure that air emissions, surface discharges and effluent from the site shall not exceed the values prescribed by applicable law.

36.SERVICE OF NOTICE

For the purpose of this contract, any notice to Operator from the Owner’s Representative shall be deemed to be served upon the Operator if it be addressed to him or in which he signs the tender and be handed to him or in the case of a firm to any member of the firm personally or in the case of a company to the Secretary personally or left at his usual place of business or posted to him by a prepaid registered letter properly addressed to the name and address given in his letter of tender or such other address as the

Operator may notify in writing to the Owner’s Representative for this purpose.

37.Not Used

38.JURISDICTION

All disputes under the contract shall be subject to Court in Bangalore jurisdiction only.

39.FORCE MAJEURE

Any delays or failure in the performance of the contract by the Operator shall not constitute default hereunder or give rise to any claims for damages, if any, to the extent that such delays or failure of performance is caused by occurrences such as Acts of God or expropriation or confiscation of facilities by Government authorities, compliance with any order or request of any Government authorities, acts of war, rebellion, sabotage, commotion, insurrection, military action, usurped power, floods, earth quake, calamity, transport strike, general strikes and riots. The question of continuance of the suspension of works due to conditions of Force Majeure or termination of the contract shall be settled by mutual agreement between the Bangalore Water Supply and Sewerage Board and Operator, failing which such agreement shall be settled as provided in clause 35.

40.OPERATORS RESPONSIBILITY

Upon occurrence of an event considered by the Operator to constitute Force Majeure and which affect performance of his obligations, he shall promptly notify the Bangalore Water Supply and Sewerage Board’s representative and shall endeavor to continue to perform his obligations. The Operator shall also notify Bangalore Water Supply And Sewerage Board’s representative of any proposals, including any reasonably alternative means for performance, but shall not effect such proposals

without the consent of the Bangalore Water Supply And Sewerage Board's representative.

41.STAFF WELFARE AND INSURANCE

43.1 All labour and other employees of the Operator should be covered with comprehensive insurance, against all risks especially covered for jobs under hazardous conditions. A photocopy of the policy should be furnished to the Board. The policies should be kept alive till the completion of the contract period.

43.2 The Operator shall produce fitness certificate from any authorized Medical officer of Government Hospital for all the Technical staff and labour staff to be employed.

43.3 The Operator will be responsible to make available the safety equipment and loose tools as required for the work. If the Operator fails to keep the safety equipment and loose tools, the Board will procure the above and the cost will be deducted immediately from the bills payable to the Operator with a penalty of Rs. 2000/- for each occasion.

43.4 Approval of Insurance:- The Operator shall effect all insurance for which he is responsible with insurers and in terms approved by Bangalore Water Supply And Sewerage Board. Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify such loss or damage.

43.5 The Operator shall also insure the facilities of Bangalore Water Supply And Sewerage Board, the Operator and Sub - Operators as co-insured against all loss or damage. The insurance shall cover loss or damage from

a) Force Majeure
b) Theft
c) Replacement of major and critical equipment as per the list.
d) Workmen compensation insurance to cover all the employees as per the labour act and other statutory requirements

43.6 Compliance with conditions of Insurance Policies:- The Operator (and if appropriate, Bangalore Water Supply And Sewerage Board) shall comply with the

conditions stipulated in each of the insurance policies. The Operator shall make no material alteration to terms of any insurance without prior approval of Bangalore Water Supply and Sewerage Board. If an insurer makes (or propose to make) any such alteration, the Operator shall notify Bangalore Water Supply and Sewerage Board immediately upon becoming aware thereof.

43.7 Submission of Insurance Documentation:- The Operator shall within 10 days from the date of award submit to Bangalore Water Supply and Sewerage Board,

a) Evidence that the insurance described have been effected and
b) Copies of the policies for the insurance described.

When each premium has been paid, the Operator shall submit copy of the receipts to Bangalore Water Supply And Sewerage Board. The Operator shall be solely responsible for the safety of all related items involved in performance of the contract commencing from the date of handing over. Hence the Operator will be responsible and liable for all events during the period from the date of handing over up to the date of insurance.

43.8 Failure to maintain:- If the Operator fails to effect and keep in force any of the insurance's required under the contract or fails to provide satisfactory evidence, policies and receipts in accordance Bangalore Water Supply And Sewerage Board may, without prejudice to any other right or remedy, effect insurance for the coverage relevant to such default, any pay the premiums due. Such payments, to the extent they are commercial and reasonable shall be recoverable from the Operator by Bangalore Water Supply And Sewerage Board and may be deducted by Bangalore Water Supply And Sewerage Board from any monies due or become due to the Operator.

43.9 General:- Nothing in this clause limits the obligations, liabilities or responsibilities of the Operator, under the terms of the contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Operator in accordance with their other obligations under this contract.

42. FACILITIES FOR STAFF AND LABOUR

The Operator shall provide and maintain all necessary accommodation and welfare facilities for his (and his Sub –Operator's) staff and labour. The Operator shall not permit any temporary or permanent living quarters to be maintained within the structures forming part of the facilities.

43. HEALTH AND SAFETY

Precautions shall be taken by the Operator to ensure the health and safety of his staff and labour. The Operator shall, in collaboration with and to the requirements of the local health authorities, ensure that medical staff, first aid facilities and sick bay service are available at all times, and suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. The employees shall be vaccinated for Typhoid, Hepatitis A & B, T Tect., regularly as per the prescribed dosage and intervals. The Operator shall maintain such records and made such reports (if any) concerning health, safety and welfare of persons and damage to the property as are required under the applicable Laws.

The Operator shall appoint a member of his staff at the site to be responsible for maintaining the safety and protection against accidents of personnel on the site. This person shall be qualified for his work and shall have the authority to issue instructions and take protective measures to prevent accidents. The Operator shall send to the Bangalore Water Supply and Sewerage Board's representative details of any accident as soon as possible after its occurrence.

44. PRIVATE OPERATOR'S PERSONNEL

The Bangalore Water Supply And Sewerage Board's representative may require the Operator to remove (or cause to be removed) any person employed on the site, including the Operator's representative, who in the opinion of the Bangalore Water Supply And Sewerage Board's representative persists in any conduct which prejudicial to safety, health or

the protection of the environment. If appropriate, the Operator shall then appoint a suitable replacement person.

45. DISORDERLY CONDUCT

The Operator shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his staff and labour and to preserve peace and protection of persons and property in the neighborhood of the site against such conduct.

46. ELIMINATION OF CHILD LABOUR

a) Attention of Operators are invited to the Child Labour (Prohibition and Regulations) Act 1986, which prohibits employment of children below 14 years of age in certain occupation and process and provides for regulation of employment of children in all other occupations and progress. Employment of child labour is prohibited in Building and Construction industry.
b) Hence, all the Operators are requested to adhere to the provisions in the above Act and see that engagement of child labourers in the operational activities of the Board are completely eliminated. Any violation of the provisions will lead to penal action apart from removing the name of the Operators from the list of registered Operators.

49. HOUSE KEEPING:

The operator shall keep the treatment plant clean and tidy so that it is good appearance at all times. To this end

- all buildings and surrounding \s shall be kept neat, clean and tidy without dust, cobwebs etc.,
- the floors of all walkways, stairs, offices, toilets, panel board rooms, the laboratory and other areas inside the buildings are to be brushed and washed every day,
- windows and doors are to be washed at least once in a week,
- brass and other metal surfaces are to be polished at least once in a week,

- the process and storage tanks are to be emptied, cleaned and disinfected with bleaching powder as required for efficiency, in accordance with the O & M manual, at least once in every six months,
- shall inform his personnel and shall enforce high standards of hygiene,
- landscaped areas between and buildings shall be properly tended so that the grass, shrubs and trees are kept in a healthy condition,
- shall remove all unwanted growth of vegetation in the treatment plant area,
- Shall remove all screenings, silt, sand and other waste materials from the treatment plant area.

50. TRAINING

The Operator shall organize and implement suitable project specific training programmes so that each of his personnel is aware of and conversant in the tasks required of them and competent to carry them out at least once in a year. The Operator’s shall appoint a training officer to plan and prepare the training schedules, training modules and courses, materials etc,. The training officer shall implement the training programme by classroom and on-the-job training and shall arrange for continued education. As far as practicable personnel shall be trained to perform a variety of tasks so that each man is conversant with duties other than those of his designated role. The Operator shall monitor the performance of each of the personnel and adjust or reinforce the training as necessary.

Part of the Operator’s responsibility is to ensure the health and safety of his personnel. The training gives priority to informing and making the personnel aware of the need for health and safety.

51. ADMINISTRATION.

The Operator shall provide an administration cell at the site, suitably equipped with modern communications and office facilities, to organize and maintain the documentation, records, reports, procurement, arrange supplies etc,.

52. THE OPERATOR'S STAFF AND LABOUR:

52.1 Engagement of staff and labour:

The Operator is entirely responsible for the staffing of the treatment plant and for the adequacy of his staff, in terms of capability and numbers, to operate and maintain treatment plant in accordance with the requirements of the contract to the satisfaction of the Owner's Representative.

The Operator shall make all arrangements for the engagement of the management personnel, skilled and unskilled labour required operating and maintaining the treatment plant. The Operator's monthly rate is deemed to include for all the costs associated with their employment including their payments, social and statutory costs, their welfare, housing, transport, overheads and profit etc,. Other than accommodation arranged with BWSSB, the Operator shall not allow any of his employees to maintain any temporary or permanent quarters within the treatment plant or within BWSSB's premises.

If, during the course of the contract, the Owner's Representative is of the opinion that the Operator is not fulfilling his obligations, with respect to the operation and/ or maintenance of the treatment plant to his satisfaction, he will inform the Operator accordingly in writing. The Operator shall submit his proposals for rectification to the Owner's Representative for his approval. If it is necessary for the Operator to modify his staff and/ or labour arrangements, the Operator shall do so immediately at his own expense.

52.2 Qualifications:

The Operator shall employ only persons who are careful and appropriately qualified, skilled and experienced in their respective professions, trade or occupations.

Plant Manager of the Pump House -shall be a Graduate in Mechanical Engineering/ Electrical Engineer with at least two year experience in the operation and maintenance of pump house.

52.3 Conditions of Labour:

The Operator shall pay rates of wages and observe conditions of labour, not less favorable than those established for the trade or industry where the work is being carried out.

The Operator shall comply with all the relevant labour laws relating to his employees, and shall duly pay and afford to them all their legal rights. The Operator shall require all such employees to obey all applicable laws and regulations concerning safety at work.

52.4 Operator’s Personnel to remain unchanged:

After receiving the Owner’s Representative’s instruction to proceed, and prior to mobilization, the Operator shall update and confirm to the Owner’s Representative the organization chart, submitted with his tender, together with CVs and qualification certificates of any key personnel who have been changed from those in the Operator’s tender. Such changes, if any, shall be subject to the approval of the Owner’s Representative.

Expect as the Owner’s representative may otherwise agree, the Operator’s staff and skilled labour shall remain unchanged from those mobilized at the commencement of the contract. If, during the course of the contract, any of these staff and skilled labour resigns or becomes incapacitated or is withdrawn, with the permission of the Owner’s Representative, or is

discharged, the Operator shall nominate a replacement candidate with at least equivalent qualifications and experience for the approval of the Owner's representative. The Operator shall bear the costs of such replacements.

Similarly, the Operator shall replace any of his personnel who is found by the Owner's Representative to be unqualified, incompetent or otherwise becomes undesirable. In such circumstances, the Owner's Representative will notify the Operator at the site in writing and the Operator shall suspend the person immediately and exclude him from the site and from BWSSB's premises. If required by the Owner's Representative, the Operator shall provide a replacement as soon as possible.

52.5 Mobilization of staff and labour:

Before any of the Operator's management personnel and skilled labour commence their duties at the treatment plant, the Operator shall submit for all his personnel, management staff, skilled and unskilled labour

- qualification certificates,
- medical certificates, certifying that they are in good general health,
- passport size photographs affixing their signature.

52.6 Each of the Operator's employees will be provided with an Identity Card (with Photograph) signed by Operator and Owner's Representative. These cards shall be worn at all times while the Operator's employees are on site.

52.7 Staff and labour returns:

The Operator shall submit detailed daily returns showing the staff and the skilled labour and the numbers of the several classes of the unskilled labour employed by the Operator. The returns shall be in such form and submitted at intervals as the Owner's Representative may prescribe.

52.8 Uniforms:

The Operator personnel shall wear uniforms, distinguishable from BWSSB's uniform but otherwise of the Operator's choice, with ankle black shoes/ safety shoes/ gum boots, hand gloves, safety equipments wherever required.

53. THE LABORATORY:

The Operator shall operate and maintain the laboratory under the guidance of the BWSSB's Chemist and Owner's Representative. The sampling system shall be prepared and the Owner should approve it. Daily composite samples have to be taken and analysis has to be carried out. The laboratory has been provided with equipments required to determine the results of parameters mentioned earlier. The Operator shall maintain and operate these equipments for regular analysis. The reagents required for the operation has to be supplied by the Operator.

The Operator shall provide a qualified graduate chemist as well as one qualified lab assistant to operate the Laboratory. Records of the sampling, testing, analysis shall be maintained and submitted to the Owner's Representative daily. These records shall be consolidated monthly into a report to the Representative with the Operator's observations on performance and compliance.

54. DEFAULT OF THE OPERATOR:

54.1 Notice to correct:

If the Operator fails to carry out any of his obligations in accordance with the contract, the Owner's Representative may give notice to the Operator requiring him to make good such failure and remedy the same within a specified reasonable time.

54.2 Termination:

The Owner may, after having given 14 days' notice to the Operator, terminate the Operator's employment under the contract and expel him from the treatment plant. The Operator shall then deliver all the records, manuals, and procedure documents etc., made by him to the Owner's Representative. The Operator shall not be released from any of his obligations or liabilities under the contract. The rights and authorities conferred on the Owner and the Owner's Representative by the contract shall not be affected.

The Owner may upon such termination operate and maintain the treatment plant himself and/ or by any other contractor. The Owner or other contractor may use the records, manuals, procedure, documents etc., made by the Operator, together with spares, equipment, tools, consumables etc., purchased by the Operator during the contract, as he or they think proper.

54.3 Valuation at date of Termination:

The Owner's representative shall, as soon as possible after termination, determine and advise the Operator of all sums then due to the Operator as the date of termination. This shall include the value of the spares, equipment, tools, and consumables etc., purchased by the Operator during the contract, at the date of termination after giving credit to the Owner for the amounts deemed by the Owner's Representative in respect of these items.

54.4 Payment after termination:

After termination, the Owner shall not be liable to make any further payments to the Operator until all the costs incurred by the Owner in replenishing the stocks of spares and tools etc., the costs of remedying defects and the completion of outstanding work, in accordance with the conditions of the contract.

The Owner shall be entitled to recover from the Operator the extra costs, if any, of operating and maintaining the treatment plant for the remainder contract period after allowing for any sums due to the Operator. If there are no such extra costs, the owner shall pay any balance to the Operator.

55. BRIBES:

If the Operator, or any of his agents or servants gives or offers to give to any person any bribe, gift, gratuity or commission as an inducement or reward:

- for doing or forbearing to do any action in relation to the contract or to any other contract with the Owner or
- for doing or forbearing to show favour or disfavour to any person in relation to the contract or to any other contract with the Owner,

then the Owner may, after having given 14 days' notice to the Operator, terminate the Operator's employment under the contract and expel him from the site and the provisions above shall apply as if such termination had been made in accordance with this clause.

TECHNICAL SPECIFICATIONS

INTRODUCTION

i) The 1.5 MLD Tertiary Treatment Plant at CubbonPark is situated within the premises of the CubbonPark, opposite to Kanteerava Stadium on the Kasturba Main road. The plant was constructed in 2005 with an objective of recycling the wastewater for non-potable reuse. The plant draws the raw sewage from the

sewer line passing behind the wet well of the plant and is treated in the plant upto tertiary level.

ii) The Cubbon Park TTP which was constructed with an objective of recycling the wastewater for non-potable reuse was operated to its full capacity of 1.5 MLD to the full requirement of garden area of cubbon park. However, there has been requirement of recycled water for nonpotable use in Indira Gandhi fountain Banglore Golf Club, Vidhana souda, Legislator's Hostel, Rajbhavan etc. In order to meet the additional demand of recycled water. capacity upgradation of Cubbon Park TIP of capacity from 1.5 MLD to 4.0 MLD is made by upgrading the existing TTP of 1.5 MLD to 2.0 MLD and constructing an additional 2.0 MLD TTP by M/s. SUEZ India Pvt Ltd and commissioned in the year 2018

iii) 7.1 SELECTION OF TECHNOLOGY

iv) The additional treated water produced from the Cubbon Park TTP after its capacity upgradation shall be used for various recycling purposes in and around Vidhana Soudha, Indira Gandhi Fountain etc. and hence the recycled water should be of very high quality considering the huge general public who visits these places every day. MBR technology is known for producing treated water with very high quality standards with almost nil health hazards. In addition, the area required to build a TTP is least with MBR technology.

v) The existing TTP at Cubbon Park was built based on Membrane Bio Reactor (MBR) Technology which has been working very satisfactorily in the last 10 years.

vi) Keeping in view of the above and also taking into consideration of the prominence of the places where the treated water to be supplied, the land constraints in this location, the capacity upgradation at Cubbon Park shall be done based on MBR technology only.

vii) 7.2 SITE LOCATION

viii) The existing 4 MLD capacity Tertiary Treatment Plant of Cubbon Park is located within the premises of the Cubbon Park. The plant is very close to the

Corporation Circle and is situated on the Kasturba Road and is right opposite to the Kanteerava Stadium.

7.5 RAW SEWAGE AND TREATED WATER QUALITY

7.5.1 Raw Sewage Quality

The following is the limiting quality of the raw sewage that was used for the design of existing TTP and the same quality should be used for the design of the proposed 2 MLD TTP as well.

S. No.	Parameter	Unit	Value
1)	pH		6.8 -8
2)	Temperature	oC	25 – 30
3)	Colour	Hazen Unit	40
4)	TDS	mg/l	618 – 702
5)	TSS	mg/l	450
6)	Total BOD3, 27deg C	mg/l	300
7)	Filtered BOD3, 27deg C	mg/l	90 – 132
8)	Total COD	mg/l	660
9)	Filtered COD	mg/l	235
10)	Alkalinity	mg/l as CaCO3 (min)	370
11)	Calcium Hardness	mg/l as CaCO3	112-151
12)	Magnesium Hardness	mg/l as CaCO3	57-118
13)	Ammonical Nitrogen	mg/l	37
14)	TKN	mg/l	63.5
15)	Oil & Grease	mg/l	5 – 16
16)	Dissolved phosphate (PO4)	mg/l	6- 11
17)	Iron (Fe)	mg/l	5 -12.7
18)	Total coliform	MPN/100ml	109 – 1010

7.5.1 Treated Water Quality

The following is the quality of the treated water that was considered for the design of existing TTP and the same quality should be used for the design of the proposed 2 MLD TTP as well.

Parameter	Design Standard
a) pH	6.5 to 8.0
b) Biochemical Oxygen Demand (BOD)	Less than 4 mg/L
c) Chemical Oxygen Demand (COD)	Less than 100 mg/L
a) d) Total Suspended Solids (TSS)	Less than 3 mg/L
e) Turbidity	Less than 2 NTU
f) Residual Chlorine	Less than 1 NTU
d) g) Total Coliforms	Less than 2.3 MPN/100 mL
h) Fecal Coliforms	BDL
i) Ammonical Nitrogen as N	Not more than 5 in mg/L
j) Total Nitrogen	Not more than 10 in mg/L

ix) Electrical and Mechanical works:

The Operator may carry out all the Electrical and Mechanical repair works required for the purpose of uninterrupted treatment of the wastewater.

Pumping Machinery and Electrical works – General

a) All the materials used shall conform to the relevant I. S. S. wherever applicable. The make and other details of the materials proposed to be used should be furnished along with the tender. Only approved make has to be used in the case of replacement of materials.
b) Continuous earth connection has to be ensured.
c) The wiring and cabling work should be done as per I E rules.

d) Any damages or breakages, chipping etc., caused during execution of the work shall be rectified by the Operator at his cost to the satisfaction of the Owner's Representative – in – charge.

e) The Operator has to test each and every point after the completion of the repair work to the entire satisfaction of the Owner's Representative – in – charge.

f) The Operator is responsible for the safe custody of all the materials and equipment's under this contract till handing over to Board.

g) All necessary civil works required for the erection/ repair of all equipment's and accessories under this contract should be done by the Operator at his cost.

h) Test certificates for machinery and equipment's should be produced along with supply.

i) The Operator should maintain one set of Tools for the maintenance of the machinery and equipment's supplied by them under this contract.

x) Mandatory duties of the Operator

1. The Operator is responsible for the procurement and for testing and maintenance of supplies of all goods and services necessary to ensure compliance with the Operator's obligation under this contract.
2. Operator should provide manpower required for the operation and maintenance of the wastewater treatment plant. The treatment plant means the entire plant consisting of various units required/ constructed for the purpose of treatment of wastewater. It is the responsibility of the Operator to provide necessary supervisory staff and security staff to prevent entry of unauthorized persons.
3. The treatment plant has to be operated round the clock in three shifts of 8 hours each throughout the year without any break. The plant has to be operated according to the availability of incoming wastewater and has to be increased or decreased at any point of time as directed by Owner's Representative – in – charge. The Operator has to maintain all the units in good working condition free from objectionable odour.
4. Minor and major repairs to equipment's involved in the contract have to be carried out by the Operator during the O & M period of 10 years. Any

repairs to the pipe lines inside the plant premises has to be attended by the Operator during O & M period. If any expert opinion or services is required for carrying out the Major or Minor repairs, the same may be called and work may be carried out without any additional cost or no cost to the Board.

5. On completion of the maintenance period, the treatment plant has to be handed over to the Board in good running condition. At the time of taking over by the Board all the equipment's and accessories in the treatment plant will be inspected and if any defects are noticed, the same will have to be rectified to the original running condition only after which the unit will be taken over.
6. The Operator should ensure that back up teams would be available to operate the plant and equipment's continuously.
7. The Operator has to operate and maintain the plant as recommended in the manual with proper logs and records of the work carried out.
8. The Operator has to properly maintain all the valves.
9. The Operator has to operate and maintain Capacitor and allied switchgear to maintain power factor not less than 0.90 or as prescribed by KPTCL. Penalty if any levied by KPTCL has to be borne by the Operator.
10. The Operator has to keep and maintain all units of the treatment plant and its surroundings neat, clean and tidy and in an aesthetic manner.
11. The Operator has to maintain the garden developed in and around the plant premises and also has to develop the garden further wherever it is possible.
12. Inspection registers and other registers should be maintained and to be made available to the inspecting officer of the Board.
13. Mandatory regulations prescribed by the Government shall be followed by the Operator without any lapse, including those conditions amended by those departments periodically.
14. The Operator should enclose the list of staff to be employed with qualification certificate, experience certificate and their passport size photograph affixing their signature.
15. The Operator should provide uniform, identification badges to all the staff and they should wear during working hours.

16. Tools and tackles for the operation and maintenance should be provided by the Operator.
17. Any equipment, tools and plants supplied by the Board should be kept in good working condition and these should not be taken out of the premises without the written permission of the Owner's Representative – in – charge.
18. The Operator shall provide a Notice board detailing precautions to be taken by operation personnel in work conformity with Industries and labour regulations.
19. The materials should be properly stocked for easy verification and easily accessible for receiving and storing the fresh stock whenever they are supplied at site.
20. Printing of registers, log sheets and stationery required for the maintenance of the records has to be arranged by the Operator at his cost.
21. The Operator has to maintain basic cost records for all the direct and indirect expenditure and overheads on regular basis as prescribed by Owner's Representative – in - charge.
22. It is the responsibility of the Operator to liaison with KPTCL for attending fuse – off calls and other related complaints. Also the relative cost charged by KPTCL has to be borne by the Operator.
23. The Operator shall make payments to the employees as per the relevant statutory requirements and should obtain required license as per the statutory requirements laid down by Central/ State Government.

iii) Minor and Major Repairs:

The word Minor repair means all Electrical and Mechanical repairs, replacement of spares such as bearings, electrical spares carried out in the plant for the continuous operation of the plant round the clock without break down for not more than 1 Hour of any equipment.

The word Major repair means all repair works carried out to Mechanical and Electrical equipments.

The minor and major repair doesn't include the item of works, which exceeds more than Rs. 5,00,000/- in each item of work. The cost is inclusive of material cost and labour cost. The rate analysis for carrying out the repairs costing more than Rs.

5,00,000/- has to be prepared and submitted to the Owner for approval. If the Owner feels that such repair works can be carried out within the limit of Rs. 5,00,000/-, then the Operator has to carry out such works as major repairs for which no additional payment will be made. The decision of the Owner is final and binding on the Operator.

SL.NO	DESCRIPTION	QUANTITY	CAPACITY/ SIZE	KW/ HP RATING	MAKE
List of equipments cubbon park plant					
SL.NO	**DESCRIPTION**	**QUANTITY**	**CAPACITY/ SIZE**	**KW/HP RATING**	**MAKE**
1	RAW SEWAGE PUMP - STREAM-A	4 NO(2W+2 S)	55m3/hr	10 HP	KISHORE PUMPS
2	RAW SEWAGE PUMP - STREAM-B	4 NO(2W+2 S)	55m3/hr	15 HP	KISHORE PUMPS
3	FINE SCREEN STREAM-A	2 NO	6mm	1 HP	JASH ENGINEERINGS

4	FINE SCREEN STREAM-B	2 NO	6mm	0.5 HP	JASH ENGINEERINGS
5	ACTUATOR	4 NO	0.27Kw		AUMA
6	DRUM SCREEN STREAM-A	2 NO	0.8mm	0.5 HP	CONTACT
7	DRUM SCREEN STREAM-B	2 NO	0.8mm	0.5 HP	JASH ENGINEERINGS
8	RAS PUMP STREAM-A	2 NO	120 m3/hr	4 HP	KISHORE PUMPS
9	RAS PUMP STREAM-B	2 NO	120 m3/hr	4 HP	KISHORE PUMPS
10	SUBMERISABLE MIXER STREAM -A	2 NO		4 HP	SULZER
11	SUBMERISABLE MIXER STREAM -B	2 NO		5.5 HP	SULZER
12	PROCESS AIR BLOWER STREAM-A	2 NO (1W+1S)	2900 m3/hr	120 HP	EVEREST BLOWERS
13	PROCESS AIR BLOWER STREAM-B	2 NO (1W+1S)	2900 m3/hr	120 HP	EVEREST BLOWERS
14	SCOUR AIR BLOWER STREAM-A	3 NO (1W+2S)	396 m3/hr	30 HP	EVEREST BLOWERS
15	SCOUR AIR BLOWER STREAM-B	3 NO (1W+2S)	396 m3/hr	30 HP	EVEREST BLOWERS
16	AIR COMPRESSOR STREAM-A	2 NO (1W+1S)	12 kg/cm2	3 HP	ATLAS COPCO
17	AIR COMPRESSOR STREAM-B	2 NO (1W+1S)	12 kg/cm2	3 HP	ATLAS COPCO
18	PERMEATE PUMP STREAM-A	4 NO (2W+2S)	75m3/hr	5.5 HP	GRUND FOS
19	PERMEATE PUMP STREAM-B	4 NO (2W+2S)	75m3/hr	7.5 HP	GRUND FOS

20	CENTRIFUGE	1 NO		25 HP	GEA
21	CHEMICALS DOSING PUMP				
21 a}	sodium hypo dosing pump for disinfection	2 NO (1W+1S)	350 LPH	0.5 HP	MILTON ROY
21 b}	hypo dosing pump for maintenance	2 NO (1W+1S)	350 LPH	1 HP	MILTON ROY
21 c}	citric acid pumps	2 NO (1W+1S)	100 LPH	0.5 HP	MILTON ROY
22	WASTE SLUDGE PUMP (WAS) STREAM-A	2 NO (1W+1S)	5.5 m3	1 HP	ROTO PUMPS
23	WASTE SLUDGE PUMP (WAS) STREAM-B	2 NO (1W+1S)	10 m3	2 HP	NETZSCH
24	DG SET	1 NO	380KVA		POWERICA
25	FIBER DECON PUMP	2 NO (1W+1S)	17 m3/h		RONAK ENGINEERING
26	CCT MIXER	1 NO	0.75 kv		MILTON ROY
27	AGITATOR FOR DEWATERING POLY	1 NO	0.75 Kw	1 HP	BHARATH BIJLE
28	AGITATOR FOR CITRIC ACID	1 NO	0.3Kw		BHARATH BIJLE
29	EOT CRANE	2 NO	6 ton		CARRY MORE
30	FLOW RATE SENSORS STREAM-A (INLET)	1 NO	0-3300/hr		E&H
31	FLOW RATE SENSORS	1 NO	0-3300/hr		E&H

	STREAM-B (INLET)				
32	FLOW RATE SENSORS STREAM-A (OUTLET)	1 NO	0-3300/hr		ABB
33	FLOW RATE SENSORS STREAM-B (OUTLET)	1 NO	0-3300/hr		E&H
34	LEVEL SENSOR	8 NO	HYDROSTATIC LEVEL TRANSMETER		E&H
35	DO MEASURING SYSTEM	4 NO	0-20ppm		HACK
36	ONLINE TURBIDITY ANALYSER	1 NO	0-20 mvA		E&H
37	RESIDUAL CHLORINE	1 NO	0-20 mvA		E&H
38	FLOW TOTALIZER STREAM-A (INLET)	1 NO	pulsed dc excitation		E&H
39	FLOW TOTALIZER STREAM-B (INLET)	1 NO	pulsed dc excitation		E&H
40	FLOW TOTALIZER STREAM-A (OUTLET)	1 NO	pulsed dc excitation		ABB
41	FLOW TOTALIZER STREAM-B (OUTLET)	1 NO	pulsed dc excitation		E&H

LUBRICATION DETAILS OF CUBBON PARK PLANT					
EQUIPMENT	GRADE OF OIL	QUANTITY IN LITERS	REPLACEMENT PERIOD	GREASE	REPLACEMENT PERIOD
SUBMERSABLE PUMP	L40	6	2000 HOURS/ ONCE IN 3 MONTHS	SERVO RR-3	ONCE IN 6 MONTHS
FINE SCREEN	SERVO SYSTEM 220	2	ONCE IN A MONTH		ONCE IN A MONTH
DRUM SCREEN	SERVO SYSTEM 220	2	ONCE IN A MONTH		ONCE IN A MONTH
ACTUATORS	SAE 80	1	ONCE IN 6 MONTHS		ONCE IN A MONTH
CHEMICAL PUMPS	SERVO SYSTEM 320	2	ONCE IN 3 MONTHS		ONCE IN A MONTH
CENTRIFUGE	SERVO SYSTEM 320	5	1000 HOURS/ ONCE IN 6 MONTHS		ONCE IN 15 DAYS
AIR BLOWER	SERVO HP GEAR 90	6	250 HOURS/ ONCE IN A MONTH		ONCE IN 3 MONTHS
SCOUR AIR BLOWER	SERVO HP GEAR 90	4	250 HOURS/ ONCE IN A MONTH		ONCE IN 3 MONTHS

Note:above listing Equipments mentioned in the table are only indicative not limited to. The scope of the work includes operation and maintenance of other left out equipments installed in the premises

of the Tertiary Treatment Plant (TTP)(cubbon park TTP)

FORMATS

Format – I

EXPERIENCE CERTIFICATE FOR OPERATION AND MAINTENANCE OF INTERMEDIATE SEWAGE PUMPING STATION (ISPS)

This is to certify that ..... have under taken operation and maintenance of Intermediate Sewage Pumping Station of capacity ..... MLD at ..... from ..... To ..... . The performance of the above Operator in carrying out the operation and maintenance of the above ISPS is satisfactory.

Signature with designation.

Name:

Company’s name and address:

Note: This certificate has to be signed by the officer in the rank of Chief Engineer or General Manger or the Works Manger of the organization.

Format - II

HANDING / TAKING OVER OF ASSETS

Inspection carried out on .....

Handed over on .....

Signature of Board Owner’s Representative ..... Name: .....

Signature of the Operator ..... Name: .....

Format - III

CONDITION SHEDULE OF ASSESTS AT HAND OVER

(use separate sheet for each unit)

Name of the unit:

Name of the equipment	Operational	Observed defects	Comments

Preventive maintenance Schedule

Operator should adopt a preventive maintenance schedule for avoiding breakdowns. These preventive maintenance methods include but not limited to the following:

DAILY

1) Cleaning of the plant area
2) Checking oil levels and tap up if necessary and greasing all the moving parts
3) Checking the vibrations in the pump sets, moving assemblies etc.,
4) Tightening the foundation bolts
5) Checking rise in temperature of bearings in motors, in moving parts and other units
6) Checking the functioning of gauges, electrical measuring units
7) Checking the leakages in the pipe line, pumps, water retaining structures
8) Checking the functioning of bridges, moving parts in the clarifiers
9) Checking the functioning of the transformers
10) Checking the functioning of the components in the panel boards

11) Measurement of current and voltage in all panel boards and recording the same in log book
12) Maintaining the garden and other plants

WEEKLY

1) Tightening of all electrical connections
2) Checking the temperature difference due to loose connections
3) Watering electrical earth pits
4) Checking the functioning of all types of valves
5) Checking of the over load relays
6) checking of the single phase preventers
7) De-weeding of transformer yard

MONTHLY

1) Changing of gland packing
2) Checking the indicators for wearing of parts
3) Checking of all electrical contacts
4) Checking the motor with megger
5) Meggering of all electrical equipments

QUARTERLY

1) Relay testing and calibration of meters, gauges, instruments
2) Calibration of motor speed
3) Level gauges

YEARLY

1) Checking for overhauling of equipment wherever required
2) Improvements if required for operation of motors
3) Testing of all equipment’s and instruments

FAULT REPORTING

When a fault becomes apparent on any equipment, it is imperative that fault is reported and action taken in orderly manner. It is suggested to maintain “Fault Reporting Sheets” with possible coding and initiate a suitable response, setting priorities and planning workloads.

Guidance Notes

The “Fault Reporting Sheets may contain the following.

Date	The date on which the fault is identified
WIN no.	Works Identification Number (number which identifies item of equipment)
Priority Code	In the form of Number/ Letter
	No. 1 – Essential to works operation
	No. 2 – Desirable but not essential
	No. 3 – Not essential to works operation
	A – Action required within 24 hours
	B – Action required within 7 days
	C – Action required within 14 days
Work shop	Indicate type of Fault
E/ M/ I	E – Electrical
	M – Mechanical
	I – Instruments
Fault Code	Indicate condition of fault
	A – Unit failed
	B – Exhibiting signs of imminent failure
	C – Exhibiting signs of wear
Location	Position on site
Details of fault	indicate nature of fault and work required
WON No.	Works Order Number, this relates to any request for work to be carried out and enables records to be kept

Authorized by Initials of the person responsible for authorization

At present it is not possible to fully complete report sheets as WIN numbers and priority code have not been set. These should be set as soon as the asset register is completed for the wastewater Treatment Plant. It is suggested that appropriate sections of the fault report sheet be filled in by a designated senior officer at the wastewater treatment Plant every day, whether or not any faults have been identified on that day. The completed fault sheets must be signed and distributed to staff responsible for maintenance duties and a copy sent to the Executive Owner's Representative. A second copy should be retained on site such that the responsible officer may check on action taken and achieve details of faults, which have arisen on works.

SECTION 8:

DRAWINGS

(Not Used)

SECTION 9:

BILL OF QUANTITIES

(Filled vide Karnataka Public Procurement portal under financial document through work template)

Note:

(1) Item for which no rate or price has been entered in will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities (refer: ITB Clause 11.2 and CC Clause 37.2).

(2) Unit rates and prices shall be quoted by the Tenderer in Indian Rupees.

(3) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by quantity, the unit rate quoted shall govern [ITT Clause 24.1 (b)]

SECTION 10:

FORMAT OF BANK GUARANTEE FOR SECURITY DEPOSIT

To: _____ [name of Employer]
_____ [address of Employer]

WHEREAS _____ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Rs._____ [amount of guarantee] [63]_Rupees_____ _____[in words], and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee][64] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 30 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

[63] An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract.